PRELIMINARY ASSESSMENT & SITE INVESTIGATION

CAT SWAMP HILL DUMP SITE

BYRAM TOWNSHIP, SUSSEX COUNTY, NEW JERSEY

EPA ID NO. NJ0000200998

VOLUME I OF II

New Jersey Department of Environmental Protection and Energy
Division of Publicly Funded Site Remediation
Bureau of Environmental Measurements and Quality Assurance

CAT SWAMP HILL DUMP SITE
AKA: SHAWS DUMP
ROUTE 206
BYRAM TOWNSHIP, SUSSEX COUNTY, NEW JERSEY

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NARRATIVE

PRELIMINARY ASSESSMENT AND SITE INVESTIGATION REPORT

PART I: GENERAL INFORMATION

Site Name: Cat Swamp Hill Dump Site
Aka: Shaws Dump
Address: Route 206
Municipality: Byram Township **State:** New Jersey **Zip Code:** 07874
County: Sussex
EPA ID No.: NJ0000200998
Block: 366 **Lot(s):** 10
Block: 366 **Lot(s):** 3
Latitude: 40° 55′ 23" **Longitude:** 74° 43′ 52"
Acreage: Lot 10, 25.43 **SIC Code:** 4953
Lot 3, 225.46
Dump Site, Approx 10

Current Owner: 136717/136718 Canada Inc. (Block 366, Lot 10)
c/o Larry Wainberg
Mailing Address: 4645 Boulevard Def. Grandes PR
City: St. Leonard **State:** Quebec **Zip Code:** HIR185

Current Owner: NJDEP (Block 366, Lot 3)
Mailing Address: Labor and Industry Building
City: Trenton **State:** New Jersey **Zip Code:**

Current Operator: None, site is an inactive dump.

Owner/Operator History:

NAME	OPERATOR/ OWNER	DATES FROM	TO
136717 Canada Inc./ 136718 Canada Inc.	owner	11/30/86	present
NJDEP (Block 366, Lot 3)	owner	1982	present
11 Overbrook Corp.	owner	11/30/86	11/30/86
Subco. Inc.	owner	11/26/86	11/30/86
Kurt Erickson, Donald Bell, William Roche	owners	5/1/85	11/26/86
Michael & Madeline Hydash	owners	6/6/73	5/1/85
Robert & Madeline Shaw	owners	3/6/52	6/6/73

Surrounding Land Use (zoning, adjacent properties):

Land in the immediate area of the site is primarily wooded and undeveloped. Area land uses include residential and commercial properties.

Distance to Nearest Residence or School: 1,200 feet
Direction: North
Population Density (residents per square mile): 385

PART II: SITE OPERATIONS

Discuss all current and past operations at the site. Identify all waste sources, the type and quantity of hazardous waste at each source and the type of containment for each source.

The Cat Swamp Hill Dump is a 10-acre site located west of Route 206 in Byram Township, Sussex County on parcels owned by a Canadian developer, Larry Wainberg, and the NJDEP. The southern portion of the dump (approximately 3.5 to 4 acres) is located on NJDEP property which was obtained by eminent domain in 1982 to be added to the Allamuchy Mountain State Park (Block 366, Lot 3, 225.46 acres). The remainder of the site lies on the Wainberg property (Block 366, Lot 10, 25.43 acres). The original dump site was owned by Robert Shaw and was actively being landfilled during his ownership of the property from 1952 to 1973. It could not be determined at the time of the deed search if Mr. Shaw had owned that portion of the dump site currently on NJDEP property at the time of dumping or if he had expanded his dump onto this property. (Attachment A)

It has been reported by the Byram Township Environmental Commission that the site operated for about two decades until it was closed in the mid 1960s. The Byram Township Environmental Commission conducted preliminary investigations of the site using aerial photographs and interviews with local residents and past site workers. The Commission reports that several long trenches were dug at the site to receive household and industrial wastes as well as numerous large bails of insulating material. Interviews with a truck driver who brought materials to the site revealed that the bails of material, along with some furnace wastes, were from the Mineral Wool Company in Stanhope (now the U.S. Mineral Products Company). Many other residents familiar with the site used it for deposition of construction and household wastes. When the site was recently being considered for development, residents attending township meetings reported that industrial dumping had occurred at the site as well. (Attachments A, J)

Local residents reported regular dumping from the Mineral Wool Company as well as liquid industrial wastes and drums from unknown sources. A bulldozer operator who worked at the site for

approximately two years reported that most of the refuse disposed of at the site was household wastes interlayed with Mineral Wool wastes (insulating materials, fireproofing materials and furnace waste resulting from burning of slag to make rock wool); however, he did notice a number of drums including at least two or three flatbed trucks, stacked with 50-gallon drums, dumped into trenches and other excavations. He also stated that the trenches were dug to get cover soil to put over the garbage. It was reported in the Byram Township investigation that these trenches were dug to the bedrock, which would eliminate even the modest benefits of soil to confine any liquid wastes. (Attachment A)

An additional review of aerial photographs was conducted by NJDEP, Office of Site Assessment personnel to determine the history of the site. Early photographs from 1939 and 1951 indicated that the site was an open, unwooded hilltop which appeared to be covered with grasses and other low vegetation. The first signs of disturbance were noted in the subsequent set of photographs dated 1961. These photographs revealed a long trench in the northwest section of the site running from the northeast to the southwest approximately 500 feet long. The excavated soil was piled along the northwest side of the trench and numerous trucks were noted along the southeast side of the trench. It appeared that some objects were within the trenches; however, it was unclear as to what the objects were. In these same photographs a kidney shaped area approximately 300 by 75 feet was noted in the southeast corner of the dump site. It appeared to have large bails of material and other unknown solid wastes piled throughout its eastern side. In later photographs this area had been backfilled and did not show the previously identified bails and solid wastes. A third smaller dump area was also evident in the 1961 aerial photographs. This small dump area was located just to the northeast of the kidney shaped dump area and had solid wastes and refuse within its boundaries. The next set of aerial photographs, from 1974, revealed that the large trench, as well as the kidney shaped dump and smaller dump area to the northeast had apparently been backfilled as these no longer appeared on these plates. The 1974 photographs did reveal four trenches located centrally between the large trench and the kidney shaped dump area previously discussed. It has been reported by workers at the site that these trenches were dug to obtain soil for backfilling the other dump areas. No activity was expected in photographs later than 1974 as the dump was reportedly closed sometime in the mid 1960s. (Attachment H)

A Pre-Sampling Assessment was conducted on April 8, 1994 by NJDEP, Office of Site Assessment personnel and members of the Byram Township Environmental Commission. The inspection revealed several trenches and areas of solid waste disposal on the site. Solid wastes noted on site included drums, metal foils, unknown insulating materials, tires, slag wastes and various other household garbage. Soil gas surveys conducted in those areas where alleged liquid waste dumping occurred did not reveal significant

readings above background; however, it is possible that these alleged materials may have leached to the subsurface due to the elapsed time since deposition. Details of this inspection are provided in Attachment I.

Subsequently, a site investigation was conducted at the site to confirm allegations of dumping and landfilling at the site. A total of 24 soil and three potable well samples were collected on June 16, 1994 by NJDEP personnel during this inspection. Sample results are summarized in the appropriate pathway sections of this report and in Table I.

PART III: PERMITS

A. NJPDES

Number	Discharge Activity	Date Issued	Expiration Date	Formation or Body of Water Discharged To
N/A				

B. New Jersey Air Pollution Control Certificates

Plant ID No.: N/A
No. of Certificates: None issued
Equipment Permitted: N/A

C. BUST Registration

Registration No.: N/A
No. of Tanks:

Tank No.	Capacity (gallons)	Contents of Tank	Integrity

No underground storage tanks exist at this site.

D. Other Permits

Agency Issuing Permit	Type of Permit	Permit No.	Date Issued	Expiration Date
N/A				

PART IV: SOIL EXPOSURE

Describe soil type. Include soil series, composition of the soil and permeability of the soil.

The United States Department of Agriculture, Soil Conservation Service lists the soils at the dump site as Rockaway Series and Rock Outcrop. The Rockaway Series consists of deep, well-drained, gently sloping to very steep soils on uplands. These soils are formed in coarse-textured or moderately coarse-textured glacial till. The lower portion of the soil profile is a fragipan of very firm, dark brown and yellowish-brown gravelly sandy loam approximately 14 inches thick. The Rockaway-Rock outcrops are 70 to 90 percent bedrock outcrops, rock rubble, or soil material less than 10 inches thick and 5 to 20 percent extremely stony Rockaway soils. Slopes range from 25 to 35 percent. (Attachment B)

Discuss contaminants identified in the soil. Include sampling date, sampling agency or company, sample locations, depth and contaminant level. Identify samples collected from a residential property, school, daycare center, workplace, terrestrial sensitive environment or resource. State whether Level 1 or Level 2 contamination is present.

A site investigation was conducted at this site on June 16, 1994 by the NJDEP, Office of Site Assessment to determine if dumping activities had caused any soil contamination. At this time 24 soil samples were collected in and around the alleged dump areas and near the adjacent wetland to the east. Sample results above current NJDEP Soil Cleanup Criteria (SCC) are listed below. For a complete list of contaminants detected see Table I.

Sample #	Depth/Description	Contaminants	ppm	SCC (ppm)
S-1	3-4 feet, Area #1	beryllium	1	1
S-2	0-6 inches, drum carcass area, north end of site	PCBs beryllium zinc	24 4.4 12,700	2 1 1,500
S-3	2.5-3 feet, north end of Area #2	beryllium	1.6	1
S-4	12-18 inches, middle of Area #2	none above standard	NA	NA
S-5	3 feet, between Area #1 and Area #2	none above standard	NA	NA
S-6	2 feet, between Area #1 and Area #2	none above standard	NA	NA

S-7	4-5 feet, between Area #1 and Area #2	beryllium	1.1	1
S-8	4 feet, trench #1, Area #3	PCBs beryllium	3.5 3.8	2 1
S-9	3.5 feet, middle of trench 1 in Area #3	PCBs beryllium	4.86 4.6	2 1
S-10	5 feet, trench #1, Area #3	PCBs beryllium	8.1 2.5	2 1
S-11	4 feet, trench #2, Area #3	none above standard	NA	NA
S-12	4 feet, trench #2, Area #3	PCBs beryllium lead zinc	2.2 2.5 5,400 2,270	2 1 600 1,500
S-13	3 feet, trench #3, Area #3	beryllium	2.5	1
S-14	3 feet, trench #3, Area #3	PCBs beryllium	430 7.3	2 1
S-15	5 feet, trench #4, Area #3	beryllium	1.2	1
S-16	4-4.5 feet, trench #4, Area #3	beryllium	2.9	1
S-18	4.5 feet, below drums east of trench #4, Area #3	beryllium	3.5	1
S-19	0-6 inches, below drums east of trench #4, Area #3	beryllium nickel	2.6 2,990	1 2,400
S-20	0-6 inches, near drums in Area #5	PCBs beryllium TPHC	8.3 1.2 11,000	2 1 10,000
S-22	2-3 feet, north end of landfilled area	beryllium	3	1
S-23	3.5-4 feet, in landfilled area	beryllium zinc	7 2,020	1 1,500
S-24	12 inches, in landfilled area	beryllium	8.8	1
S-26	0-12 inches, at swamp edge	none above standard	NA	NA

S-27	0-12 inches, at swamp edge	thallium	21.7	2

Total area of surficial contamination (square feet): Estimated at 50,000+ square feet.

If no soil sampling has been conducted, discuss areas of potentially contaminated soil, areas that are visibly contaminated or results from soil gas surveys.

Soil sampling has been conducted at this site.

Determine if any commercial agriculture, silviculture, livestock production or grazing are present on or within 200 feet of the site.

No commercial agriculture, silviculture, livestock production or grazing is conducted within 200 feet of this site.

Number of people that occupy residences or attend school or day care on or within 200 feet of the site: none
Number of workers on or within 200 feet of the site: none

Number of on-site employees: none

PART V: GROUND WATER ROUTE

A. HYDROGEOLOGY

Describe geologic formations and aquifer(s) of concern. Include interconnections, confining layers, discontinuities, composition, hydraulic conductivity and permeability.

Geologic maps provided by the Township of Byram indicate that the site geology consists of Quaternary glacial deposits underlain by shallow bedrock. Two formations of bedrock exist below the site which are divided by a northeast to southwest line. (see Attachment C) The northwestern portion of the dump site is underlain by hornblende syenite while the southeastern portion is underlain by a blend of hypersthene, quartz and andesine gneiss. Thickness of these formations below the site are unknown. (Attachment C)

Depth to aquifer of concern: unknown
Depth from lowest point of waste disposal/storage to highest seasonal level of the saturated zone of the aquifer of concern: unknown
Permeability of the least permeable layer between the ground

surface and the aquifer of concern: 10^{-6} to 10^{-8} cm/sec
Thickness of aquifer: unknown
Direction of ground water flow: variable over the area of the site.

Karst (Y/N): No; however, the Franklin Lime Formation is karst and is within the 4 mile target distance limit.
Wellhead Protection Area (Y/N): No **Distance:** N/A

B. MONITORING WELL INFORMATION

Well No.	Screen Depth	Formation	Location

No monitoring wells exist at this site.

Identify the upgradient well(s): N/A

Briefly discuss why the monitoring wells were installed and describe contaminants identified in the monitoring wells. Include Well No., sampling date, sampling agency or company, contaminant levels and remediation standards. Discuss any other groundwater sampling that has occurred.

No monitoring wells exist at this site.

C. POTABLE WELL INFORMATION

Distance to nearest potable well: 1,200 feet
Depth of nearest potable well: 124 feet

Identify all public supply wells within 4 miles of the site:

Water Company	Distance from site (miles)	Depth (feet)	Formation
Brookwood-Musconetcong River	0.3 (3)	66-350	Kittatinny & Gneiss
Willor Manor	0.75	unknown	Quaternary Dep.
Strawberry Point	0.75	unknown	Granite Bedrock
North Shore	1.0	unknown	Amphibolite
Colby	1.4	unknown	Gneiss Bedrock
East Brookwood Estates	1.4	unknown	Quaternary Dep.

Water Company	Distance from site (miles)	Depth (feet)	Formation
Stanhope Borough	1.4-1.9 (4)	97-225	Franklin Limes & Gneiss
Mount Olive Township	2.1-2.7 (5)	49-344	Terminal Moraine & Granite
Mount Olive Township	3.3-3.8 (7)	96-422	Granite Bedrock
Forest Lakes	3.8 (2)	65,102	Stratified Drift
Roxbury Township	3.0-3.9 (5)	75-365	Granite & Stratified Drift
Hopatcong Borough	3.0-3.7 (9)	74-500	Undifferentiated PreCambrian
Ard. Mt. Olive Assoc.	3.6 (2)	350,400	Undifferentiated PreCambrian

(Map 5, Attachment E)

Discuss private potable well use within 4 miles of the site. Include depth, formation and distance, if available.

A number of private potable wells exist in the area of the site. These wells are generally screened less than 200 feet deep in Precambrian crystalline bedrock, with a majority in the 100-150 foot range. These private potable wells are intermixed in areas of Byram Township which are served by a number of smaller water companies. (Attachments D, F)

Discuss the site's source of potable water.

This site does not have a potable water source.

Discuss for each aquifer the population utilizing that aquifer for drinking purposes within 4 miles of the site.

Distance from site (miles)	Population/Aquifer A	B	C
0 - 1/4	3	0	0
1/4 - 1/2	1,060	0	0
1/2 - 1	345	55	0
1 - 2	4,075	615	925
2 - 3	1,000	0	0
3 - 4	18,035	1,265	0

A - Bedrock Aquifers
B - Glacial Deposits
C - Franklin Limestone

Discuss information regarding potable well sampling related to the site. Also include any other evidence of contaminated drinking water or wells closed due to contamination. State whether Level 1 or Level 2 contamination is present.

Three private potable wells were sampled as part of the site inspection conducted at this site on June 16, 1994. Only one of the wells sampled, 2 Sutton Lane, exhibited contamination with 4 ppb of tricholorethene above current NJDEP, Ground Water Quality Standards. Attribution could not be established to link this site to the contamination found in the potable well, therefore, Level 1 or Level 2 cannot be established for this sample.

Identify industrial/irrigational wells within the vicinity of the site. Include depth, formation, distance and direction, if available.

The closest industrial/irrigational well is located 1.8 miles south of the site. This well is screened at 553 feet in the Leithsville Formation and is operated by N.J. Foreign Trade Zone. (Map 5)

D. POTENTIAL

Discuss the potential for ground water contamination, including any other information concerning the ground water contamination route.

It has been reported by local residents and previous workers at the site that liquid industrial wastes and numerous drums have been landfilled or directly dumped on the ground surface. However, sampling of local potable wells by NJDEP personnel did not reveal contamination attributable to the site. (Attachment A)

PART VI: SURFACE WATER ROUTE

A. SURFACE WATER

Does a migration pathway to surface water exist? (Y/N):
Flood plain: >500 year (Map 7) **Slope:** 3% - 40% (Map 1)

Does contaminated ground water discharge to surface water? (Y/N):
No

Identify known or potentially contaminated surface water bodies. Follow the pathway of the surface water and indicate all adjoining

bodies of water along a route of 15 stream miles.

Surface Water Body	Distance from site	Flow(cfs)	Usage(s)
Unnamed tributary of Musconetcong River	0.5 miles	50 cfs	Recreation, Fishing
Musconetcong River	1.6 miles	100 cfs	Recreation, Fishing
Waterloo Lakes	2.6 miles	<10 cfs	Recreation, Fishing
Musconetcong River	3.1 miles	100 cfs	Recreation, Fishing
Saxton Lake	5.2 miles	<10 cfs	Recreation, Fishing
Musconetcong River	6.3 miles	100 cfs	Recreation, Fishing

Identify drinking water intakes and fisheries within 15 miles downstream (or upstream in tidal areas) of the site. For each intake or fishery identify the distance from the point of surface water entry, the name of the fishery and/or supplier and population served.

No drinking water intakes were identified for the 15 mile stream route; however, the Musconetcong River is stocked annually with trout and is utilized heavily for recreational fishing. Over 10,000 trout were stocked in the upper segment of the Musconetcong River in the spring of 1995.

Discuss surface water or sediment sampling conducted in relation to the site. Discuss visual observations if analytical data are not available (include date of observation). Include surface water body, sampling date, sampling agency or company, contaminant. State whether Level 1 or Level 2 contamination is present.

During the June 16, 1994 site inspection of the facility by NJDEP personnel, two soil samples were collected at the edge of the wetland which abuts the site to the east. One exceedence of current NJDEP Soil Cleanup Criteria for thallium was observed for these samples, however, attribution could not be established for this sample and it should not be considered an observed release.

Determine if surface water is used for irrigation of commercial

food or commercial forage crops, watering of commercial livestock or commercial food preparation.

No irrigational or commercial surface water intakes were identified within the 15 mile surface water route.

Discuss the potential for surface water contamination, include any additional information concerning the surface water route.

Surface water runoff from the eastern edge of the dump area, is received by a wetland area which abuts the dump on the eastern side. Thallium was detected at elevated levels in one sample collected at the edge of the wetland, however, attribution could not be established for this sample and it should not be considered an observed release. (Maps 1, 6)

B. SENSITIVE ENVIRONMENTS

Identify all sensitive environments, including wetlands, along the 15 stream-mile pathway from the site:

Environment Type	Surface Water Body	Flow (cfs)	Distance from site	Wetland Frontage
PFO1	Wetland	<10	0.0 mile	0.4 mile
PFO/SS1	Unnamed tributary	50	0.5 mile	0.55 mile
PFO1	Unnamed tributary	50	0.75 mile	1.5 miles
PFO/SS1	Musconetcong River	100	1.8 miles	0.4 mile
PFO1	Musconetcong River	100	2.0 miles	0.55 mile
PSS1	Musconetcong River	100	2.3 miles	0.1 mile
PFO1	Musconetcong River	100	2.4 miles	0.1 mile
PSS1	Musconetcong River	100	2.5 miles	0.8 mile
PSS1	Musconetcong River	100	3.1 miles	0.3 mile
PFO1	Musconetcong River	100	4.5 miles	0.6 mile
PFO1	Musconetcong River	100	10.9 miles	0.5 mile
PFO/SS1	Musconetcong River	100	11.4 miles	1.1 miles
PFO1	Musconetcong River	100	12.5 miles	0.4 mile

PFO1 - Palustrine forested
PFO/SS1 - Palustrine forested/scrub shrub
PSS1 - Palustrine scrub/shrub
(Attachment M)

PART VII: AIR ROUTE

Discuss observed or potential air release.

The primarily areas of concern at this site deal with buried solid wastes. The potential for air release at this site is very low.

Identify populations residing within 4 miles of the site.

Distance (miles)	Population
0 - 1/4	3
1/4 - 1/2	10
1/2 - 1	9,180
1 - 2	13,015
2 - 3	8,210
3 - 4	13,955

(Attachment G)

Identify sensitive environments and wetland acreage within 4 miles of the site.

Distance	Type of environment	Wetland acreage

Several small palustrine forested wetland areas exist within 0.5 mile of the site. The closest of these is located within the boundaries of the dump site. (Map 6)

Identify all land resources (commercial agriculture, silviculture or recreation) within 4 miles of the site.

This site abuts the Allamuchy Mountain State Park and is within 4 miles of several lakes and ponds that are used for recreational purposes; however, an air release from this site is unlikely.

Determine if a contaminant on site displays bioaccumulative properties. Identify all bioaccumulative substances that may impact the food chain.

PCBs, which are known to be bioaccumulative, have been detected in on-site soils at elevated levels.

PART VIII: REMOVAL ACTION AND/OR IEC CONDITION

Discuss conditions which constitute an IEC or warrant EPA Removal Action consideration (improper storage of incompatible/reactive materials, leaking or unsound containers, inadequate site security, subsurface gas threat).

Conditions at this site do not constitute an immediate environmental concern (IEC) nor do they warrant an EPA removal action.

PART IX: PREVIOUS OR ONGOING REMEDIAL ACTIONS

Discuss for each medium or area of concern all previous and ongoing remedial activities at the site. Include why initiated, type of action, date and present status.

No remedial activities were discovered for the site.

PART X: ENFORCEMENT ACTIONS

No enforcement actions were discovered for the dump site during the file search.

PART XI: CONCLUSIONS AND RECOMMENDATIONS

List each area of concern and state whether further remediation is required.

The following areas of concern have been identified at this site due to elevated levels of contaminants detected in on-site soils:

- The northern area of the site, which contains several drum carcasses displayed elevated levels of PCBs, beryllium and zinc. (S-2)

- Area #1 has displayed elevated levels of beryllium. (S-1)

- Area #2 has displayed elevated levels of beryllium. (S-3)

- One sample collected between Area #1 and Area #2 has displayed elevated levels of Beryllium. (S-7)

- Samples collected from Area #3, trenches #1 through #4, have displayed elevated levels of PCBs, beryllium, lead and zinc. (S-8 through S-16)

- Samples collected adjacent to drum carcasses to the southeast of Area #3 have displayed elevated levels of nickel and beryllium. (S-18, S-19)

- A sample collected adjacent to drum carcasses in Area #5 displayed elevated levels of PCBs, beryllium and TPHC. (S-20)

- Samples collected within the areas of landfilled debris and slag along the eastern border of the site displayed elevated levels of beryllium and zinc. (S-22, S-23, S-24)

- One sample collected at the edge of the wetland on the eastern edge of the dump site displayed elevated levels of thallium (S-27), however, attribution could not be established for this

sample and it should not be considered an observed release.

No further action is warranted under CERCLA. It is recommended that additional investigations be conducted to characterize the contaminated soils at this site and the potential for ground water and surface water contamination. It should also be noted that the levels of beryllium above the current NJDEP, Soil Cleanup Criteria of 1 ppm, may be attributable to the unique lithology indicative of this area of Sussex County.

Submitted by: David Dibblee
Title: HSMS 4
NJDEP, Division of Publicly Funded Site Remediation,
Bureau of Environmental Measurements and Quality Assurance
Environmental Measurements and Site Assessment Section
Date: June 1995

PART XII: POTENTIALLY RESPONSIBLE PARTIES

NAME	OWNER/OPERATOR/ KNOWN DISCHARGER	CURRENT ADDRESS
136717/136718 Canada Inc.	owner	4645 Boulevard Def. Grandes PR St. Leonard, Quebec, Canada HIR185
Robert and Madeline Shaw	owner/operator	unknown

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
VOLATILES

DATE SAMPLED: June 16, 1994
MATRIX: Soil
UNITS: ppm

SAMPLE ID NO:	S-1 459	S-2 460	S-3 461	S-4 462	S-5 463	S-6 464	S-7 465	S-8 466	S-9 467	S-10 468	S-11 469	S-12 470	S-13 471	S-14 472	S-15 473
CHLOROMETHANE															
BROMOMETHANE															
VINYL CHLORIDE															
CHLOROETHANE															
METHYLENE CHLORIDE	.005J		.003J	.004J					.004JB				.018JB	.013JB	.010JB
ACETONE													.007J		
CARBON DISULFIDE															
1,1 DICHLOROETHENE															
1,1 DICHLOROETHANE															
1,2 DICHLOROETHENE															
CHLOROFORM															
1,2 DICHLOROETHANE															
2 - BUTANONE															
1,1,1 TRICHLOROETHANE															
CARBON TETRACHLORIDE															
BROMODICHLOROMETHANE															
1,2 DICHLOROPROPANE															

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VOLATILES

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cis-1,3-DICHLOROPROPENE															
TRICHLOROETHENE															
DIBROMOCHLOROMETHANE															
1,1,2 TRICHLOROETHANE															
BENZENE															
trans-1,3-DICHLOROPROPENE															
BROMOFORM															
4-METHYL-2-PENTANONE															
2-HEXANONE															
TETRACHLOROETHENE															
1,1,2,2 TETRACHLOROETHANE															
TOLUENE															
CHLOROBENZENE															
ETHYLBENZENE															
STYRENE															
XYLENE (total)															
TOTAL VOA															
TOTAL VOA TICs															

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
SEMIVOLATILES

DATE SAMPLED: June 16, 1994
MATRIX: Soil
UNITS: ppm

SAMPLE ID NO:	S-1 459	S-2 460	S-3 461	S-4 462	S-5 463	S-6 464	S-7 465	S-8 466	S-9 467	S-10 468	S-11 469	S-12 470	S-13 471	S-14 472	S-15 473
PHENOL		.15J												.210J	
bis(2-CHLOROETHYL) ETHER															
2-CHLOROPHENOL															
1,3 DICHLOROBENZENE															
1,4 DICHLOROBENZENE															
1,2 DICHLOROBENZENE															
2-METHYLPHENOL															
2,2'oxybis (1-CHLOROPROPANE)															
4-METHYLPHENOL															
N-NITROSO-DI-N-PROPYLAMINE															
HEXACHLOROETHANE															
NITROBENZENE															
ISOPHORONE															
2-NITROPHENOL															
2,4-DIMETHYLPHENOL															
bis(2-CHLOROETHOXY)METHANE															
2,4-DICHLOROPHENOL															

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
SEMIVOLATILES

DATE SAMPLED: June 16, 1994
MATRIX: Soil
UNITS: ppm

SAMPLE ID NO:	S-1 459	S-2 460	S-3 461	S-4 462	S-5 463	S-6 464	S-7 465	S-8 466	S-9 467	S-10 468	S-11 469	S-12 470	S-13 471	S-14 472	S-15 473
1,2,4 TRICHLOROBENZENE															
NAPHTHALENE															
4-CHLOROANILINE															
HEXACHLOROBUTADIENE															
4-CHLORO-3-METHYLPHENOL															
2-METHYLNAPHTHALENE															
HEXACHLOROCYCLOPENTADIENE															
2,4,6 TRICHLOROPHENOL															
2,4,5 TRICHLOROPHENOL															
2-CHLORONAPHTHALENE															
2-NITROANILINE															
DIMETHYLPHTHALATE															
ACENAPHTHYLENE															
2,6-DINITROTOLUENE															
3-NITROANILINE															
ACENAPHTHENE															
2,4-DINITROPHENOL															

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
SEMIVOLATILES

DATE SAMPLED: June 16, 1994
MATRIX: Soil
UNITS: ppm

SAMPLE ID NO:	S-1 459	S-2 460	S-3 461	S-4 462	S-5 463	S-6 464	S-7 465	S-8 466	S-9 467	S-10 468	S-11 469	S-12 470	S-13 471	S-14 472	S-15 473
4-NITROPHENOL															
DIBENZOFURAN															
2,4-DINITROTOLUENE															
DIETHYLPHTHALATE		.510								.099J		.280J			
4-CHLOROPHENYL-PHENYLETHER															
FLUORENE															
4-NITROANILINE															
4,6-DINITRO-2-METHYLPHENOL															
N-NITROSODIPHENYLAMINE (1)															
4-BROMOPHENYL-PHENYLETHER															
HEXACHLOROBENZENE									.092J						
PENTACHLOROPHENOL		.48J												.250J	
PHENANTHRENE															.200J
ANTHRACENE															
CARBAZOLE															
DI-N-BUTYLPHTHALATE									.29J	.13J		.130J			
FLUORANTHENE															.280J

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
SEMIVOLATILES

DATE SAMPLED: June 16, 1994
MATRIX: Soil
UNITS: ppm

SAMPLE ID NO:	S-1 459	S-2 460	S-3 461	S-4 462	S-5 463	S-6 464	S-7 465	S-8 466	S-9 467	S-10 468	S-11 469	S-12 470	S-13 471	S-14 472	S-15 473
PYRENE														.11J	.280J
BUTYLBENZLPHTHALATE		.470								.11J		.21J			
3,3'-DICHLOROBENZIDINE															
BENZO(a)ANTHRACENE															.16J
CHRYSENE															.220J
bis(2-ETHYLHEXYL)PHTHALATE	.560B								.89JB	1.2JB		1.5JB	1JB		
DI-N-OCTYLPHTHALATE															
BENZO(b)FLUORANTHENE															.180J
BENZO(k)FLUORANTHENE															.150J
BENZO(a)PYRENE															.160J
INDENO(1,2,3-CD)PYRENE															
DIBENZ(a,h)ANTHRACENE															
BENZO(g,h,i)PERYLENE															
TOTAL SEMIVOLATILES															
TOTAL SEMIVOLATILE TICs															

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
PESTICIDE ORGANICS, PCBs

DATE SAMPLED: June 16, 1994
MATRIX: Soil
UNITS: ppm

SAMPLE ID NO:	S-1 459	S-2 460	S-3 461	S-4 462	S-5 463	S-6 464	S-7 465	S-8 466	S-9 467	S-10 468	S-11 469	S-12 470	S-13 471	S-14 472	S-15 473
alpha-BHC															
beta-BHC											.0062J				
delta-BHC															
gamma-BHC (LINDANE)															
HEPTACHLOR															
ALDRIN															
HEPTACHLOR EPOXIDE															
ENDOSULFAN I															
DIELDRIN															
4,4'-DDE	.0061														
ENDRIN		.018J													
ENDOSULFAN II															
4,4'-DDD	.0043														
ENDOSULFAN SULFATE															
4,4'-DDT	.015														
METHOXYCHLOR										5.3D					
ENDRIN KETONE															

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
PESTICIDE ORGANICS, PCBs

DATE SAMPLED: June 16, 1994
MATRIX: Soil
UNITS: ppm

SAMPLE ID NO:	S-1 459	S-2 460	S-3 461	S-4 462	S-5 463	S-6 464	S-7 465	S-8 466	S-9 467	S-10 468	S-11 469	S-12 470	S-13 471	S-14 472	S-15 473
ENDRIN ALDEHYDE															
alpha-CHLORDANE															
gamma-CHLORDANE															
TOXAPHENE															
AROCLOR-1016															
AROCLOR-1221															
AROCLOR-1232															
AROCLOR-1242		24D													
AROCLOR-1248										5.3D		1.2D			.15
AROCLOR-1254								1.5D	.66	1.3	.19J				
AROCLOR-1260	.058							2.0D	4.2D	1.5	.51	1.0D	1.6D	430D	.11

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
METALS, CYANIDE

DATE SAMPLED: June 16, 1994
MATRIX: Soil
UNITS: ppm

SAMPLE ID NO:	S-1 459	S-2 460	S-3 461	S-4 462	S-5 463	S-6 464	S-7 465	S-8 466	S-9 467	S-10 468	S-11 469	S-12 470	S-13 471	S-14 472	S-15 473
ALUMINUM	1,800	1,800	17,500	14,000	40,400	15,200	16,800	31,600	36,400	31,400	18,200	23,300	25,600	50,700	24,900
ANTIMONY			7.0UJ	7.1UJ	7.3UJ	7.0UJ	6.8UJ			8.7UJ	8.6UJ	43.8JB	32.5JB	9.1UJ	
ARSENIC	7.7	2.7J	3.0	1.9J	2.4UJ	2.2J	1.4J	1.5UJ	14.9		6.5	9.3	8.3		8.7
BARIUM	93.2	348	80.9	109	110	64.8	76.6	336	488	273	122	342	986	387	137
BERYLLIUM	1.0J	4.4	1.6				1.1	3.8	4.6	2.5		2.5	2.5	7.3	1.2J
CADMIUM	0.45UJ	3.3J	1.1J	0.46UJ	0.47UJ	0.45UJ	0.44UJ	0.58UJ	0.53UJ	3.9J	1.1J	13.4J	2.5J	0.59UJ	0.59UJ
CALCIUM	4,570	102,000	2,940	3,490J	14,500J	1,850J	3,200J	111,000J	136,000J	96,900J	9,860J	63,200J	74,300J	202,000J	10,800J
CHROMIUM	36.4	35.3	17.2	13.3J	52.9	16.5J	23.5	39.5	43.9	51.9	30.0	68.9	90.7	28.7	34.1
COBALT	18.1	12.0	16.1	11.0J	23.8	12.5	11.8	11.7J	14.9	15.5	14.1	23.5	20.2		16.0
COPPER	22.7J	1,930	28.9	10.8J	2.4UJ	11.4J	13.3J	81.8J	139J	123J	40.0J	212J	246J	35.9J	40.7J
IRON	36900	43,200	31,000	27,500	33,900	29,600	31,400	49,600	72,900	64,000	38,000	148,000	104,000	8,820	40,500
LEAD	25.9	359J	7.6	4.0	2.9J	10.3J	7.2J	262J	190J	359J	55.3J	5,400J	703J	91.3J	84.0J
MAGNESIUM	5,170	15,500	3,050	3,470	8,810	2,800	3,600	25,600	28,300	9,940	4,900	13,300	14,300	62,700	5,960
MANGANESE	741	1,680	654	672J	713J	519J	617J	1,960J	1,890J	1,440J	2,010J	1,790J	1,710J	1,800J	1,590J
MERCURY	0.21							0.81	0.42	1.1	0.22	1.3	1.8	0.24	0.28
NICKEL	56.0	56.0	9.9J	10.9J	36.1	14.3J	16.7J	23.9J	30.5J	38.5J	20.6J	52.9J	37.2J	37.8J	30.5J
POTASSIUM	870	5,040	1,340	1,340	1,950	1,230	1,460	5,870	5,870	2,420	1,020	3,390	3,400	9,530	1,430

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
METALS, CYANIDE

DATE SAMPLED: June 16, 1994
MATRIX: Soil
UNITS: ppm

SAMPLE ID NO:	S-1 459	S-2 460	S-3 461	S-4 462	S-5 463	S-6 464	S-7 465	S-8 466	S-9 467	S-10 468	S-11 469	S-12 470	S-13 471	S-14 472	S-15 473
SELENIUM	1.2UJ	1.9J	1.1UJ	1.2UJ	1.2UJ	1.1UJ	1.1UJ	1.5UJ	2.4J	1.4UJ	1.4UJ	1.4UJ	2.5J	2.2J	1.5UJ
SILVER		3.4	1.9J	4.1J	2.9	5.1	4.9	5.7	2.8	7.7	2.9	11.9	6.3	2.8	
SODIUM		824J			1,880			840J	1,100J					1,540J	
THALLIUM														1.5UJ	
VANADIUM	59.7	37.1	46.3	29.9	84.7	40.8	44.9	40.8	31.5	62.9	50.7	46.9	35.3	28.7	45.4
ZINC	610J	12,700	205J	99.4J	143J	104J	230J	735J	486J	657J	537J	2,270J	1,300J	342J	718J
CYANIDE								0.86	0.91			2.1		0.77	
TOTAL PHCs	78	290	17	25	42	15	12	5,300	1,000	480	790	480	660	1,000	210

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
VOLATILES

DATE SAMPLED: June 16, 1994
MATRIX: Soil, Ground Water
UNITS: Soil (ppm), Water (ppb)

SAMPLE ID NO:	S-16 479	S-18 476	S-19 477	S-20 478	S-22 480	S-23 481	S-29 482	S-26 484	S-27 485		PW-1 488	PW-2 489	PW-3 490	PW-4 491	
CHLOROMETHANE															
BROMOMETHANE															
VINYL CHLORIDE															
CHLOROETHANE															
METHYLENE CHLORIDE	.007JB	.010JB			.008JB		.008JB								
ACETONE															
CARBON DISULFIDE															
1,1 DICHLOROETHENE															
1,1 DICHLOROETHANE															
1,2 DICHLOROETHENE															
CHLOROFORM															
1,2 DICHLOROETHANE															
2 - BUTANONE									.032J						
1,1,1 TRICHLOROETHANE															
CARBON TETRACHLORIDE															
BROMODICHLOROMETHANE															
1,2 DICHLOROPROPANE															

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
VOLATILES

DATE SAMPLED: June 16, 1999
MATRIX: Soil, Ground Water
UNITS: Soil (ppm), Water (ppb)

SAMPLE ID NO:	S-16 474	S-18 476	S-19 477	S-20 478	S-22 480	S-23 481	S-24 482	S-26 484	S-27 485		PW-1 488	PW-2 489	PW-3 490	PW-4 491	
cis-1,3-DICHLOROPROPENE															
TRICHLOROETHENE											4J				
DIBROMOCHLOROMETHANE															
1,1,2 TRICHLOROETHANE															
BENZENE															
trans-1,3-DICHLOROPROPENE															
BROMOFORM															
4-METHYL-2-PENTANONE									.010J						
2-HEXANONE															
TETRACHLOROETHENE							.005J								
1,1,2,2 TETRACHLOROETHANE															
TOLUENE															
CHLOROBENZENE															
ETHYLBENZENE															
STYRENE															
XYLENE (total)															
TOTAL VOA															
TOTAL VOA TICs															

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
SEMIVOLATILES

DATE SAMPLED: June 16, 1994
MATRIX: Soil, Ground Water
UNITS: Soil (ppm), Water (ppb)

SAMPLE ID NO:	S-16 474	S-18 476	S-19 477	S-20 478	S-22 480	S-23 481	S-21 482	S-26 484	S-27 485		PW-1 488	PW-2 489	PW-3 490	PW-4 491	
PHENOL															
bis(2-CHLOROETHYL) ETHER															
2-CHLOROPHENOL															
1,3 DICHLOROBENZENE															
1,4 DICHLOROBENZENE				.16J											
1,2 DICHLOROBENZENE				.033J											
2-METHYLPHENOL															
2,2'oxybis (1-CHLOROPROPANE)															
4-METHYLPHENOL			.055J												
N-NITROSO-DI-N-PROPYLAMINE															
HEXACHLOROETHANE				.140J											
NITROBENZENE															
ISOPHORONE															
2-NITROPHENOL															
2,4-DIMETHYLPHENOL															
bis(2-CHLOROETHOXY)METHANE															
2,4-DICHLOROPHENOL															

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
SEMIVOLATILES

DATE SAMPLED: June 16, 1994
MATRIX: Soil, Ground Water
UNITS: Soil (ppm), Water (ppb)

SAMPLE ID NO:	S-16 474	S-18 476	S-19 477	S-20 478	S-22 480	S-23 481	S-24 482	S-26 484	S-27 485		PW-1 488	PW-2 489	PW-3 490	PW-4 491	
1,2,4 TRICHLOROBENZENE															
NAPHTHALENE															
4-CHLOROANILINE															
HEXACHLOROBUTADIENE															
4-CHLORO-3-METHYLPHENOL															
2-METHYLNAPHTHALENE															
HEXACHLOROCYCLOPENTADIENE															
2,4,6 TRICHLOROPHENOL															
2,4,5 TRICHLOROPHENOL															
2-CHLORONAPHTHALENE															
2-NITROANILINE															
DIMETHYLPHTHALATE															
ACENAPHTHYLENE															
2,6-DINITROTOLUENE															
3-NITROANILINE															
ACENAPHTHENE															
2,4-DINITROPHENOL															

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
SEMIVOLATILES

DATE SAMPLED: June 16, 1994
MATRIX: Soil, Ground Water
UNITS: Soil (ppm), Water (ppb)

SAMPLE ID NO:	S-16 479	S-18 476	S-19 477	S-20 478	S-22 480	S-23 481	S-24 482	S-26 484	S-27 485		PW-1 488	PW-2 489	PW-3 490	PW-4 491	
4-NITROPHENOL															
DIBENZOFURAN															
2,4-DINITROTOLUENE															
DIETHYLPHTHALATE															
4-CHLOROPHENYL-PHENYLETHER															
FLUORENE															
4-NITROANILINE															
4,6-DINITRO-2-METHYLPHENOL															
N-NITROSODIPHENYLAMINE (1)															
4-BROMOPHENYL-PHENYLETHER															
HEXACHLOROBENZENE															
PENTACHLOROPHENOL	.730J		.160J												
PHENANTHRENE															
ANTHRACENE															
CARBAZOLE															
DI-N-BUTYLPHTHALATE	.12J			.086J											
FLUORANTHENE															

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
SEMIVOLATILES

DATE SAMPLED: June 16, 1994
MATRIX: Soil, Ground Water
UNITS: Soil (ppm), Water (ppb)

SAMPLE ID NO:	S-16 479	S-18 476	S-19 477	S-20 478	S-22 480	S-23 481	S-24 482	S-26 484	S-27 485		PW-1 488	PW-2 489	PW-3 490	PW-4 491	
PYRENE			.140J	.160J											
BUTYLBENZLPHTHALATE			.100J												
3,3'-DICHLOROBENZIDINE															
BENZO(a)ANTHRACENE															
CHRYSENE															
bis(2-ETHYLHEXYL)PHTHALATE	.230JB														
DI-N-OCTYLPHTHALATE															
BENZO(b)FLUORANTHENE															
BENZO(k)FLUORANTHENE															
BENZO(a)PYRENE															
INDENO(1,2,3-CD)PYRENE															
DIBENZ(a,h)ANTHRACENE															
BENZO(g,h,i)PERYLENE															
TOTAL SEMIVOLATILES															
TOTAL SEMIVOLATILE TICs															

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
PESTICIDE ORGANICS, PCBs

DATE SAMPLED: June 16, 1994
MATRIX: Soil, Ground Water
UNITS: Soil (ppm), Water (ppb)

SAMPLE ID NO:	S-16 474	S-18 476	S-19 477	S-20 478	S-22 480	S-23 481	S-24 482	S-26 484	S-27 485		PW-1 488	PW-2 489	PW-3 490	PW-4 491	
alpha-BHC															
beta-BHC															
delta-BHC															
gamma-BHC (LINDANE)															
HEPTACHLOR															
ALDRIN															
HEPTACHLOR EPOXIDE															
ENDOSULFAN I															
DIELDRIN															
4,4'-DDE															
ENDRIN															
ENDOSULFAN II															
4,4'-DDD															
ENDOSULFAN SULFATE															
4,4'-DDT															
METHOXYCHLOR															
ENDRIN KETONE															

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
PESTICIDE ORGANICS, PCBs

DATE SAMPLED: June 16, 1999
MATRIX: Soil, Ground Water
UNITS: Soil (ppm), Water (ppb)

SAMPLE ID NO:	S-16 474	S-18 476	S-19 477	S-20 478	S-22 480	S-23 481	S-24 482	S-26 484	S-27 485		PW-1 488	PW-2 489	PW-3 490	PW-4 491	
ENDRIN ALDEHYDE															
alpha-CHLORDANE															
gamma-CHLORDANE															
TOXAPHENE															
AROCLOR-1016															
AROCLOR-1221															
AROCLOR-1232															
AROCLOR-1242				8.3JD											
AROCLOR-1248			.21			.180									
AROCLOR-1254		.68													
AROCLOR-1260	.290	.400J	.057J			.110			.057J						

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
METALS, CYANIDE

DATE SAMPLED: June 16, 1994
MATRIX: Soil, Ground Water
UNITS: Soil (ppm), Water (ppb)

SAMPLE ID NO:	S-16 474	S-18 476	S-19 477	S-20 478	S-22 480	S-23 481	S-24 482	S-26 484	S-27 485		PW-1 488	PW-2 489	PW-3 490	PW-4 491	
ALUMINUM	31,700	25,900	19,200	5,130	15,700	43,600	50,400	16,000	34,700						
ANTIMONY			8.0UJ	6.8UJ		8.3UJ									
ARSENIC	6.3	7.7	1.5J	1.8J	32.2	4.3J	3.3J	5.6UJ	5.4J						
BARIUM	196	274	97.8	15.8J	512	409	493	124J	276		55UJ	55UJ	55UJ	55UJ	
BERYLLIUM	2.9	3.5	2.6	1.2	3.0	7.0	8.8								
CADMIUM	2.0J	0.55UJ	0.52UJ	0.44UJ	0.46UJ	3.4J	4.3J	9.6J	5.3J						
CALCIUM	58,500J	79,400J	11,500J	3,420J	51,200J	170,000J	18,900J	17,600	18,700J		22,500J	5,300J	30,100J	21,900J	
CHROMIUM	121	105	26.4	47.4	19.1J	24.5	89.8	25.0	44.6						
COBALT	17.5	15.5	25.3J	7.1J	31.4	9.1J	11.8								
COPPER	41.1J	290J	42.8J	235J	539J	48.9J	139J	19.4J	27.3J			795J		159J	
IRON	44,800	54,600	38,700	17,300	28,900	31,400	14,600	11,800	18,100		90.4J				
LEAD	95.7J	526J	60.8J	55.2J	172J	85.8J	391J	76.9	97.1		3.0UJ	3.0UJ	3.0UJ	5.2J	
MAGNESIUM	12,900	16,800	5,170	1,780	23,800	32,700	4,270	3,315J	3,970J		7,850		9,590	7,210	
MANGANESE	1,360J	1,020J	453J	77.7J	797J	3,540J	2,430J	1,550J	1,820J					8.0J	
MERCURY	0.6	0.57	0.21			0.3	0.18		0.52						
NICKEL	35.4J	1,180J	2,990J	22.4J	60.8J	23.3J	48.6J								
POTASSIUM	1.1UJ	3,600	4,100J	767J	5,110	7,120	9,880						1,890J		

SITE NAME: Cat Swamp Hill Dump
LOCATION: Route 206
Byram Township, Sussex County

SUMMARY OF SAMPLING DATA
METALS, CYANIDE

DATE SAMPLED: June 16, 1994
MATRIX: Soil, Ground Water
UNITS: Soil (ppm), Water (ppb)

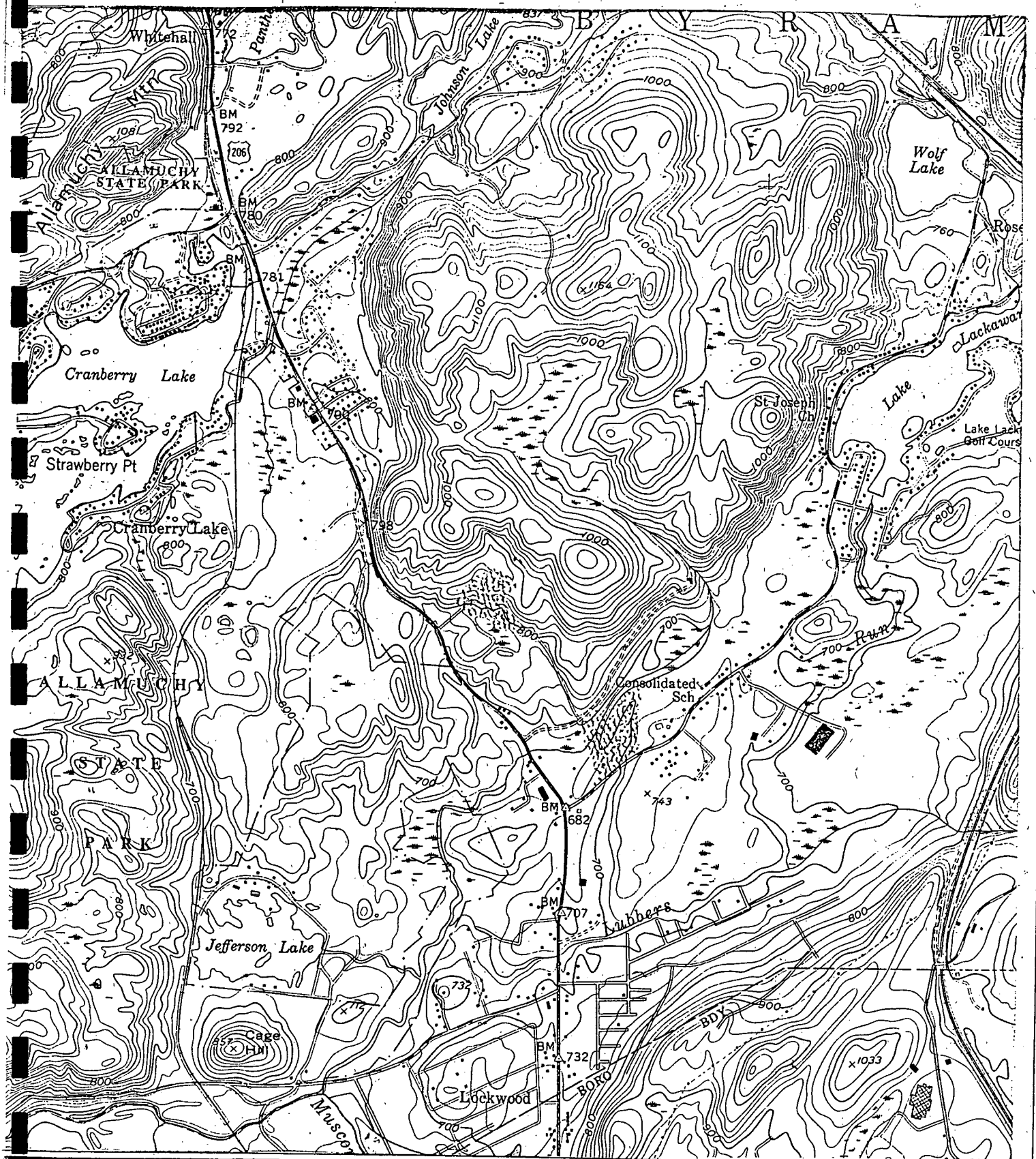
SAMPLE ID NO:	S-16 474	S-18 476	S-19 477	S-20 478	S-22 480	S-23 481	S-24 482	S-26 484	S-27 485		PW-1 488	PW-2 489	PW-3 490	PW-4 491	
SELENIUM		1.4UJ	1.3UJ	1.1UJ	2.3J	3.6J	3.2J	12.7J	8.1J						
SILVER							44.9								
SODIUM					1,360	1,780	1,690				3,690J			21,900	
THALLIUM							1.1UJ		21.7						
VANADIUM	53.8	28.3	68.5	41.6	29.8	21.8	40.2	31.2J	51.1						
ZINC	825J	404J	191J	62.9J	586J	2,020J	393J	607J	985J				29.2J		
CYANIDE							1.3								
TOTAL PHCs	920	1,100	5,100	11,000	31	280	630	490	330		—	—	—	—	

[ ] - Analyte above current NJDEP Soil Cleanup Criteria or Ground Water Quality Standard

J - Estimated concentration

B - Analyte also detected in associated blank(s)

MAPS



SCALE 1:24000

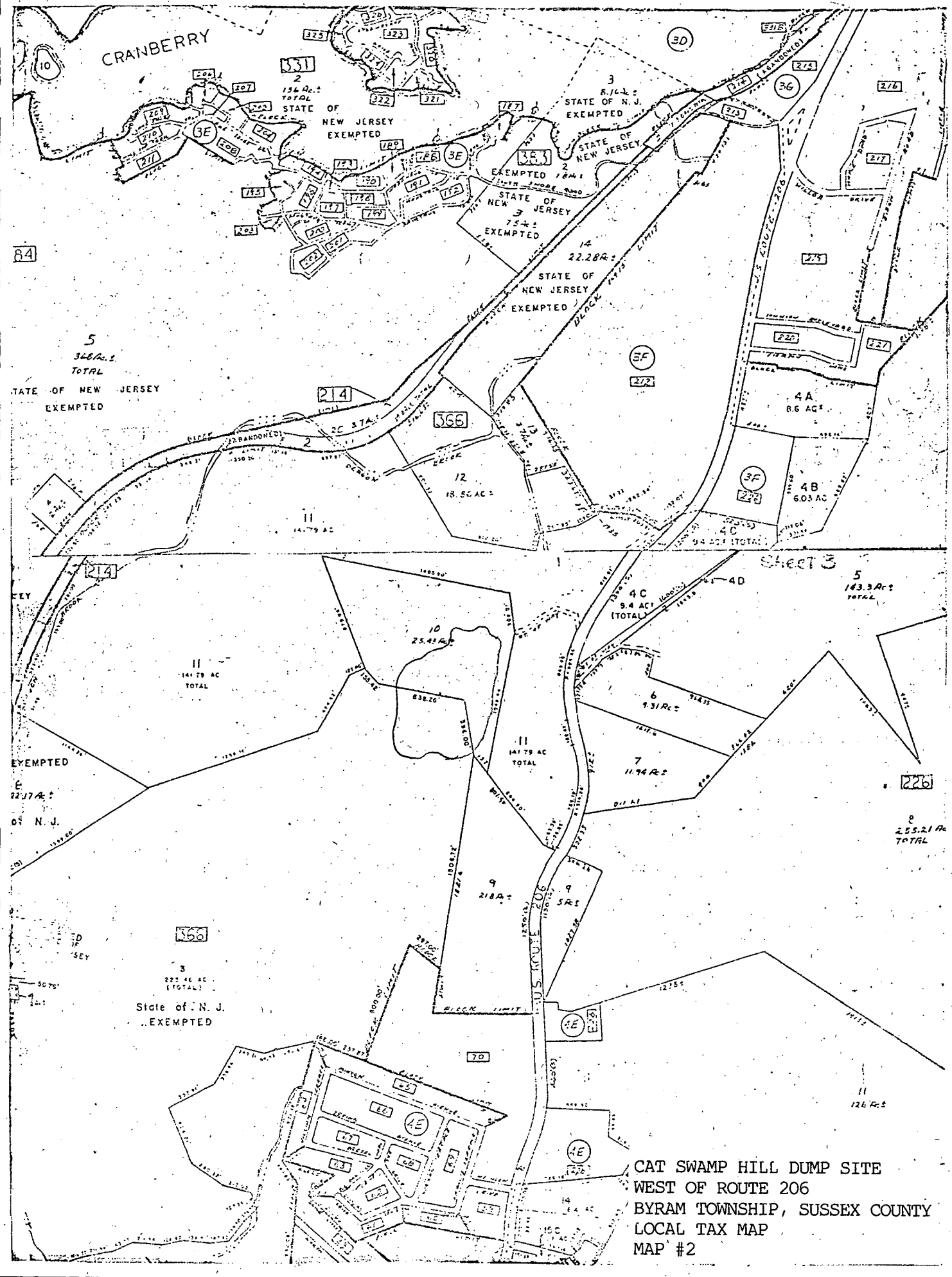
MILE 0 ½ 1

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

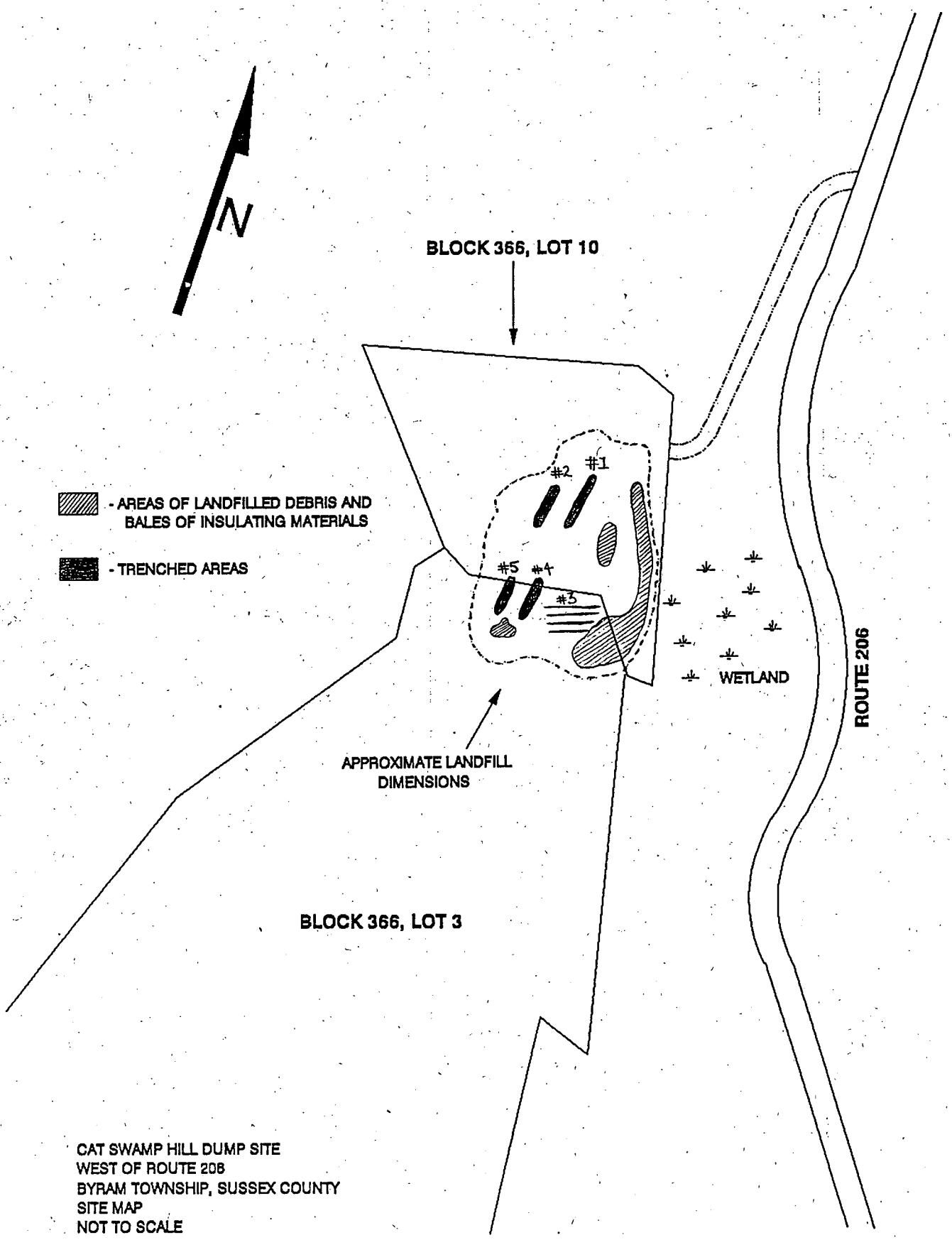
1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

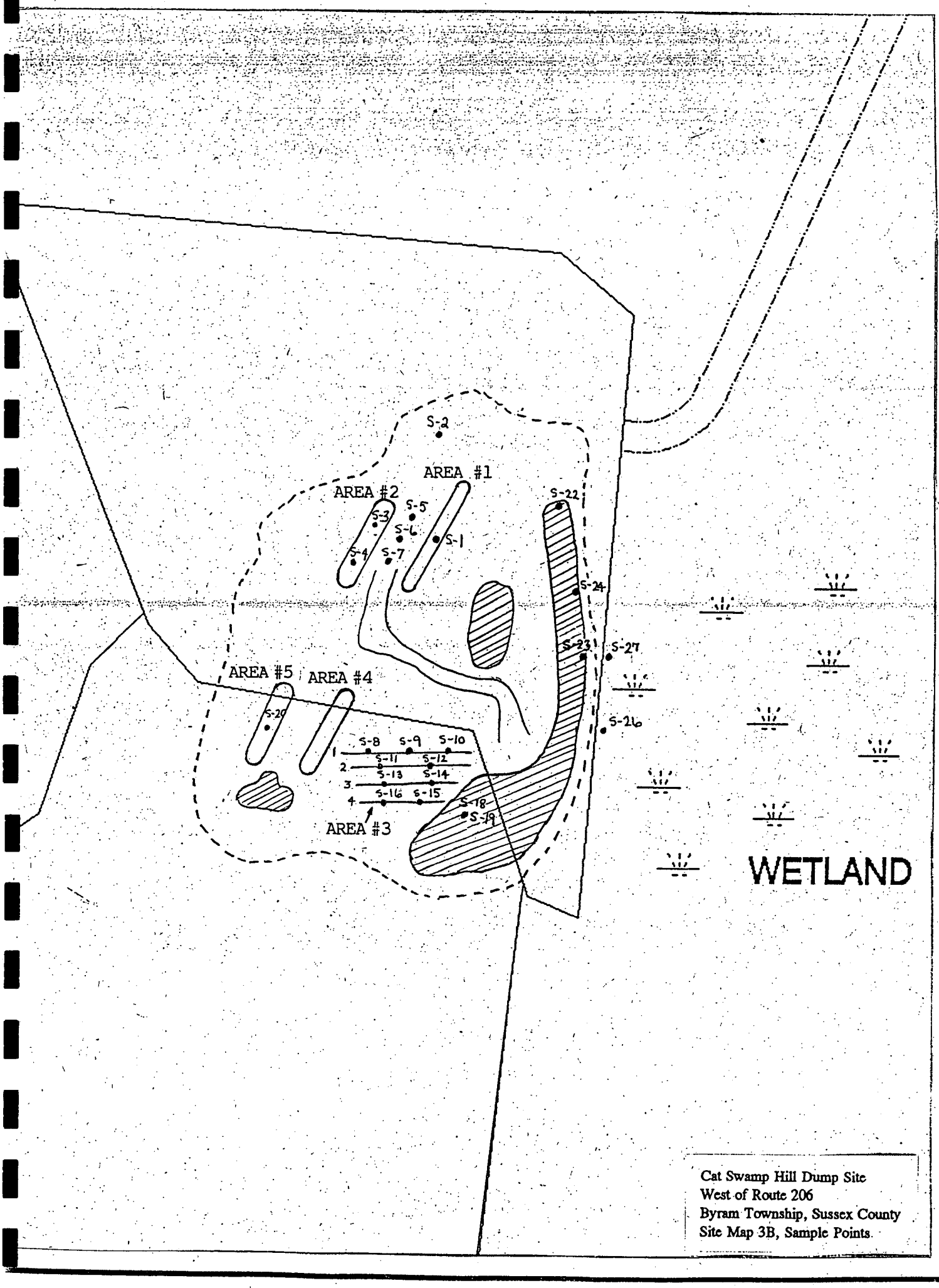
CAT SWAMP HILL DUMP SITE
WEST OF RT. 206
BYRAM TOWNSHIP, SUSSEX COUNTY
LAT. 40 55' 23"
LON. 74 43' 52"
USGS TOPOGRAPHIC MAP
MAP #1



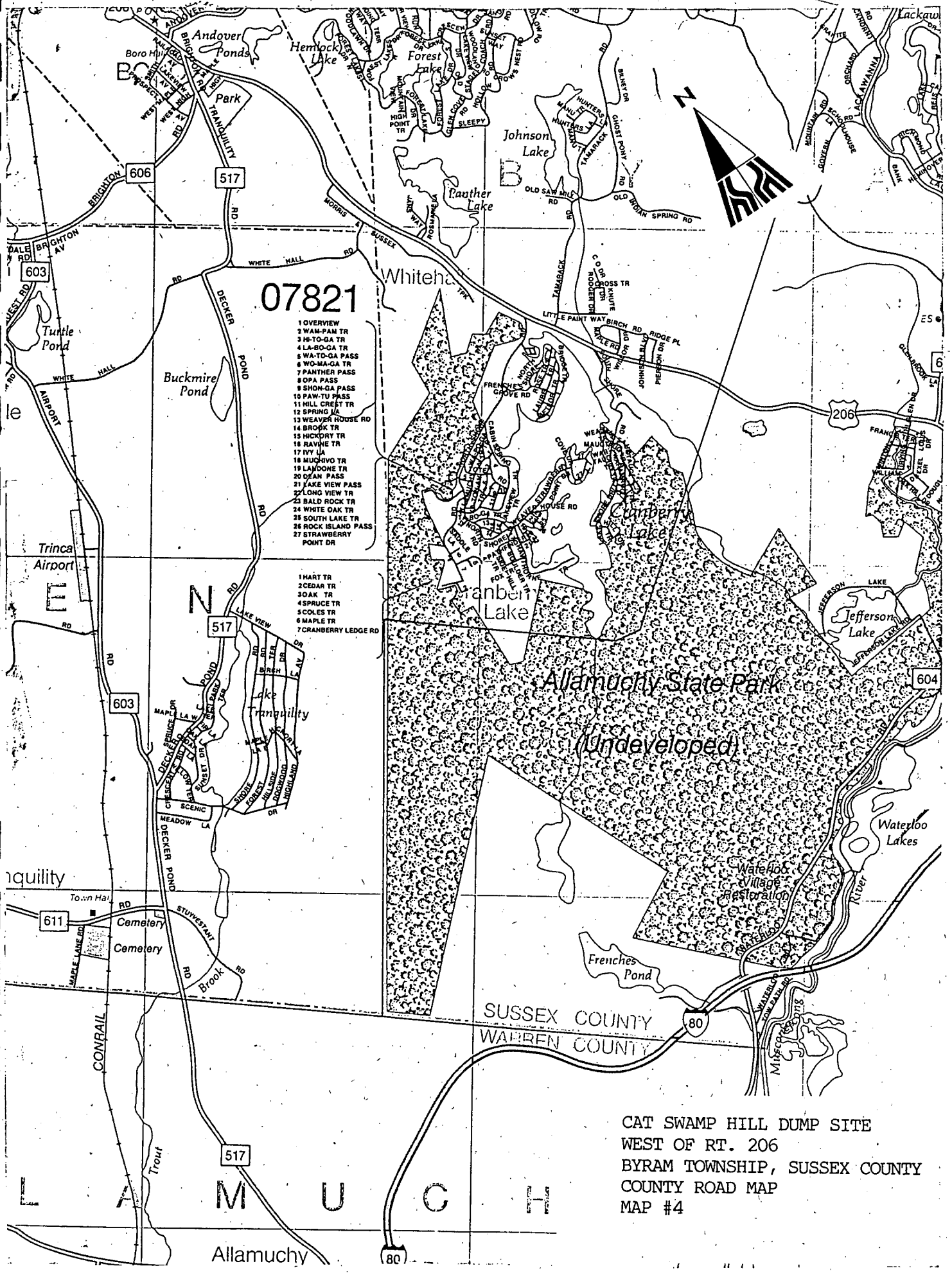
CAT SWAMP HILL DUMP SITE
WEST OF ROUTE 206
BYRAM TOWNSHIP, SUSSEX COUNTY
LOCAL TAX MAP
MAP #2



CAT SWAMP HILL DUMP SITE
WEST OF ROUTE 206
BYRAM TOWNSHIP, SUSSEX COUNTY
SITE MAP
NOT TO SCALE



Cat Swamp Hill Dump Site
West of Route 206
Byram Township, Sussex County
Site Map 3B, Sample Points



CAT SWAMP HILL DUMP SITE
WEST OF RT. 206
BYRAM TOWNSHIP, SUSSEX COUNTY
COUNTY ROAD MAP
MAP #4

SUBJECT TO REVISION

WATER WITHDRAWAL POINTS WITHIN 5.0 MILES OF:

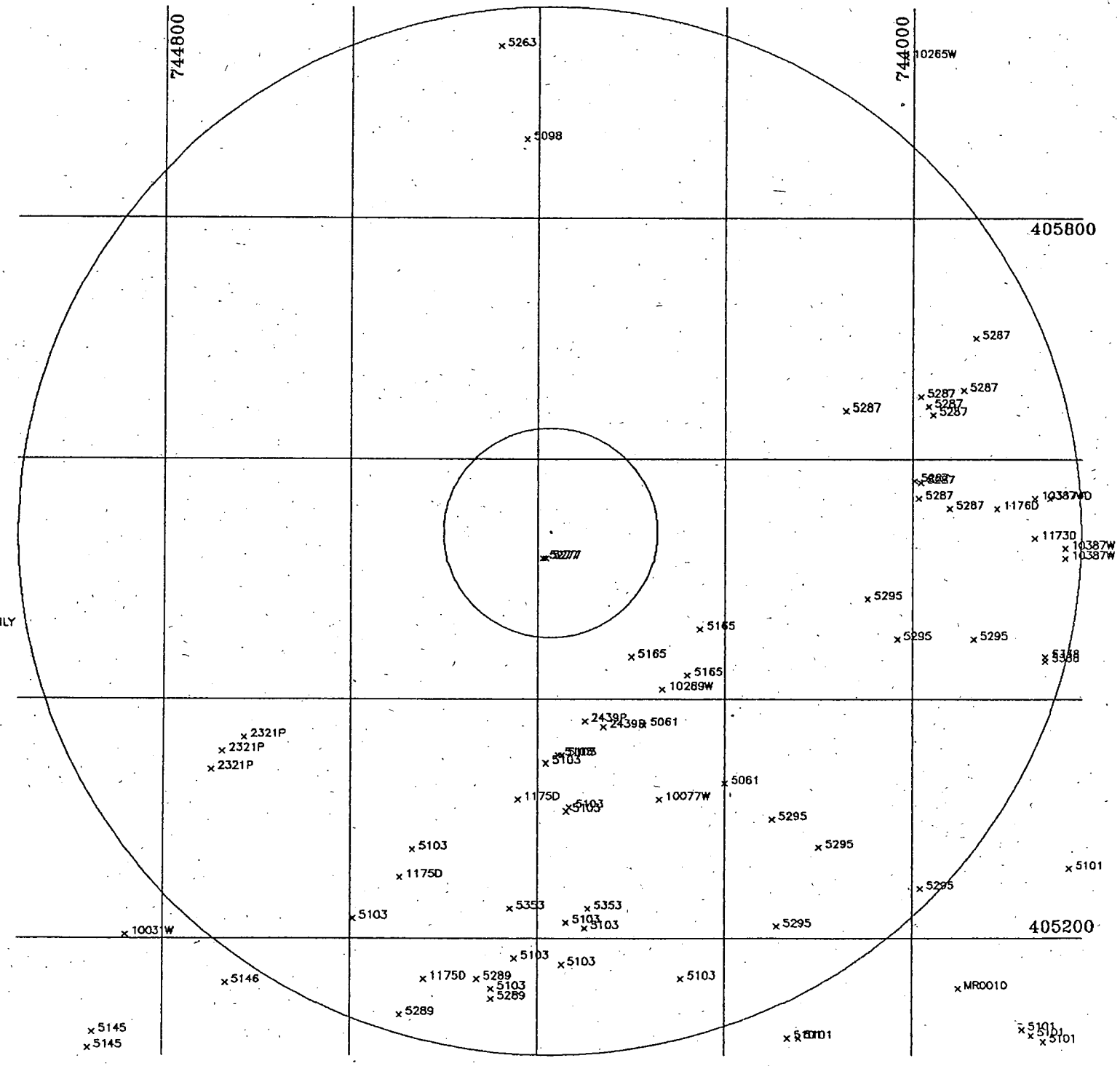
LATITUDE 405523
LONGITUDE 744352

DRAFT

SCALE: 1:63,360
(1 Inch = 1 Mile)

× 100,000 GPD WATER WITHDRAWAL POINTS ONLY

1 MILE AND 5 MILE RADII INDICATED



PLOT PRODUCED BY:
NJDEPE
WATER SUPPLY ELEMENT
BUREAU OF WATER ALLOCATION
CN-426
TRENTON, NJ 08625

DATE: 01/03/94

SUBJECT TO REVISION

 PRELIMINARY SURVEY OF WATER WITHDRAWAL POINTS WITHIN 5.0 MILES OF 405523 LAT. 744352 LON. (IN ORDER BY PERMIT NUMBER) - 01/03/94

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
10031W	HOUSE OF THE GOOD SHEPHERD	2405582	#1	405202	744825	T	5.5	41	08	173	GCKA		230
	HOUSE OF THE GOOD SHEPHERD		#2	405202	744825	U	5.5	41	08				
10077W	FLANDERS ASLPHALT DIV. OF DELL	2515896	WELL #1	405310	744242	T	2.7	27	27	152	GPCGR		150
10265W	BYRAM HOMEOWNERS ASSOC. WATER	2218673	WELL 1	405920	744005	U	5.6	37	04	350	GPCGN		100
	BYRAM HOMEOWNERS ASSOC. WATER	2241336	WELL 2	405920	744005	U	5.6	37	04	275	GPCGN		100
10289W	U.S. MINERAL PRODUCTS/CANCELED	MUSCONETCONG	RIVER	405405	744240	U	1.8	37	19		SDMUS		100
10387W	MT. ARLINGTON SERVICE	2509929	WELL 1	405515	743820	U	4.8	27	26	97	GPC		
	MT. ARLINGTON SERVICE	2511292	WELL 2	405540	743840	U	4.6	27	26	200	GPC		
	MT. ARLINGTON SERVICE	2511821	WELL 5	405510	743820	U	4.8	27	26	273	GPC		
1173D	MT. ARLINGTON BOROUGH	WELL POINTS		405520	743840		4.6	27	26		GQGU		417
1174D	MUSCONETCONG S.A.	TRENCHES		405540	743830		4.7	27	26	20	GQGU		60
1175D	MT. OLIVE TOWNSHIP	WELLS	PS#2	405140	744513	F	4.4	27	27	30	GPCGR		
	MT. OLIVE TOWNSHIP	WELLS	PS#3	405231	744528	F	3.6	27	27	250	GPCGR		
	MT. OLIVE TOWNSHIP	TRENCHES		405310	744413	F	2.6	27	27	22	GPCGR		
1176D	BERTRAND ISLAND DEV. INC.	POINT TRENCHES		405535	743905	U	4.2	27	26	25	GQUG		150
2321P	SAXTON FALLS SAND & GRAVEL CO.	POND	1	405341	744708	F	3.5	27	27	90	GQGU		4500
	SAXTON FALLS SAND & GRAVEL CO.	POND	2	405325	744729	F	3.9	27	27	40	GQGU		1500
	SAXTON FALLS SAND & GRAVEL CO.	DEWATERING PIT		405334	744722	F	3.7	27	27	45	GQGU		6000
2439P	NJ FOREIGN TRADE ZONE	2523865	BR-3	405349	744330	T	1.8	27	27	553	GCKL		100
	NJ FOREIGN TRADE ZONE	2537536	BR-4	405346	744318	T	1.9	27	27	290	GCKL		800
5061	NETCONG BOROUGH	4500272	1	405318	744200	F	2.9	27	28	88	GQGU		205
	NETCONG BOROUGH	4500273	2	405318	744200	U	2.9	27	28	113	GQGU		265
	NETCONG BOROUGH	2526342	5	405347	744252	F	2.0	27	28	350	GPCGN		245
	NETCONG BOROUGH	2522910	6	405347	744252	F	2.0	27	28	240	GQGU		260
5098	FOREST LAKES WATER COMPANY	2200591	1	405839	744408	F	3.8	37	02	102	GQSD		100
	FOREST LAKES WATER COMPANY	2213368	3	405839	744408	F	3.8	37	02	65	GQSD		165
5101	ROXBURY WATER COMPANY	2201338	1	405108	743834	F	6.7	27	36	52	GQSD		150
	ROXBURY WATER COMPANY	2529720	7	405110	744120	T	5.3	27	36	175	GCKL		350
	ROXBURY WATER COMPANY	4500315	4	405111	743842	F	6.6	27	36	40	GQSD		300
	ROXBURY WATER COMPANY	2525540	6	405235	743817	F	5.8	27	36	57	GQSD		290
	ROXBURY WATER COMPANY	2505279	2	405114	743848	F	6.5	27	36	160	GTRCG		150
	ROXBURY WATER COMPANY	2534457	1A	405108	743834	F	6.7	27	36	700	GCKL		200
	ROXBURY WATER COMPANY	2544470	7A	405110	744113	F	5.4	27	36	182	GCKL		350
5103	MOUNT OLIVE TOWNSHIP	2519568	STONEHEDG1	405245	744520	T	3.3	27	27	172	GPCGR		75
	MOUNT OLIVE TOWNSHIP	2519567	STONEHEDG2	405245	744520	T	3.3	27	27	173	GPCGR		75
	MOUNT OLIVE TOWNSHIP	2514783B	STONEHEDG3	405245	744520	T	3.3	27	27	96	GPCGR		120
	MOUNT OLIVE TOWNSHIP	2514561A	STONEHEDG4	405245	744520	T	3.3	27	27	266	GPCGR		72
	MOUNT OLIVE TOWNSHIP	4500028	HIGHRIDGE1	405208	744342	F	3.7	27	27	210	GPCGR		20
	MOUNT OLIVE TOWNSHIP	4500029	JUCKETT 1	405135	744430	F	4.4	27	27		GPCGR		20
	MOUNT OLIVE TOWNSHIP	2515906	VILLAGEGR1	405304	744342	T	2.7	27	27	344	GPCGR		45
	MOUNT OLIVE TOWNSHIP	2516087	VILLAGEGR2	405306	744340	T	2.6	27	27	81	GQTM		95
	MOUNT OLIVE TOWNSHIP	2517318	VILLAGEGR3	405332	744347	F	2.1	27	27	49.5	GQTM		105
	MOUNT OLIVE TOWNSHIP	2518054	VILLAGEGR4	405328	744355	F	2.2	27	27	88	GQTM		180
	MOUNT OLIVE TOWNSHIP	PROPOSED	VILLAGEGR5	405332	744345	T	2.1	27	27		GQTM		
	MOUNT OLIVE TOWNSHIP	2518429	GOLDMINE 1	405205	744330	F	3.8	27	27	422	GPCGR		30
	MOUNT OLIVE TOWNSHIP	2518506	GOLDMINE 2	405205	744330	F	3.8	27	27	248	GPCGR		34
	MOUNT OLIVE TOWNSHIP	2404095	INDIAN SP1	405210	744558	F	4.1	27	27	97	GQTM		85
	MOUNT OLIVE TOWNSHIP	2405720	INDIAN SP2	405210	744558	F	4.1	27	27	92	GQTM		300
	MOUNT OLIVE TOWNSHIP	4500346	PINECREST1	405150	744415	T	4.1	27	27		GQTM		80
	MOUNT OLIVE TOWNSHIP	4500347	PINECREST2	405150	744415	T	4.1	27	27		GQTM		80
	MOUNT OLIVE TOWNSHIP	2526566	HOPLER 1	405140	744228	F	4.4	27	27	485	GPCGR		100
	MOUNT OLIVE TOWNSHIP	2526567	HOPLER 2	405140	744228	F	4.4	27	27	647	GPCGR		60
	MOUNT OLIVE TOWNSHIP	2517885	LYNNWOOD 1	405147	744345	T	4.1	27	27		GPCGR		32
	MOUNT OLIVE TOWNSHIP	2518201	LYNNWOOD 2	405147	744345	T	4.1	27	27	148	GPCGR		15
5145	HACKETTSTOWN M.U.A.	2405556	4 (SEBER)	405113	744846	F	6.4	41	08	37	GQSD		300

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
	HACKETTSTOWN M.U.A.	2407212	5 (SEEER)	405105	744849	F	6.6	41	08	143	GCOK		1000
5146	HACKETTSTOWN M.U.A.	LOW MINE HILL	RESERVOIR	405138	744720	F	5.3	27	27		SDMUS		
5165	STANHOPE BOROUGH	4500030	2	405435	744216	F	1.7	39	19	97	GPCGN		125
	STANHOPE BOROUGH	4500031	3	405421	744300	F	1.4	27	27	117	GPCGN		350
	STANHOPE BOROUGH	2511618	4	405421	744300	F	1.4	27	27	103	GPCGN		225
	STANHOPE BOROUGH	2521153	5	405412	744224	F	1.9	37	19	225	GPCFL		500
5263	ANDOVER BOROUGH WATER DEPT.	4200001	1	405925	744425	F	4.7	37	01	44	GOSD		40
	ANDOVER BOROUGH WATER DEPT.	4200002	2	405925	744425	F	4.7	37	01	42	GOSD		75
5277	BROOKWOOD-MUSCONETCONG RIVER	2521375	3	405510	744357	F	0.3	37	04	350	GPCGN		120
	BROOKWOOD-MUSCONETCONG RIVER	2513822	2	405510	744355	U	0.3	37	04	200	GPCGN		75
	BROOKWOOD-MUSCONETCONG RIVER	2504732	1	405510	744355		0.3	37	04	66	GCOK		75
5287	HOPATCONG BOROUGH	2507325	8	405540	743956	F	3.5	37	12	93	GPC		60
	HOPATCONG BOROUGH	2509585	12	405548	743955	F	3.5	37	12	165	GPC		60
	HOPATCONG BOROUGH	2521763	SQUIRE	405549	743959	F	3.4	37	12	148	GPC		75
	HOPATCONG BOROUGH	2221308	RIVER STYX	405634	743927	F	4.1	37	12	475	GPC		70
	HOPATCONG BOROUGH	4200007	1	405631	743955	F	3.7	37	12	79	GPC		40
	HOPATCONG BOROUGH	2200020	2	405626	743950	F	3.7	37	12	147	GPC		40
	HOPATCONG BOROUGH	2200096	3	405622	743947	F	3.7	37	12	74	GPC		75
	HOPATCONG BOROUGH	4200008	4	405624	744043	F	3.0	37	12	150	GPC		40
	HOPATCONG BOROUGH	2201097	5	405700	743919	F	4.4	37	12	120	GPC		60
	HOPATCONG BOROUGH	4500283	MARINER ✓	405535	743936	F	3.7	37	12		GPC		35
	HOPATCONG BOROUGH	2228355	3A	405622	743947	F	3.7	37	12	500	GPC		68
5289	MT. OLIVE VILLAGES WATER CO.,	2516478	2	405130	744430	F	4.5	27	27	130	GPC		150
	MT. OLIVE VILLAGES WATER CO.,	2517783	3	405122	744528		4.8	27	27	200	GPC		150
	MT. OLIVE VILLAGES WATER CO.,	2523162	4	405140	744439	F	4.3	27	27	200	GPC		150
5295	ROXBURY TOWNSHIP WATER DEPT.	2501042	2	405430	743920		4.1	27	36	88	GOSD		250
	ROXBURY TOWNSHIP WATER DEPT.	2512596	3	405206	744127		4.3	27	36	135	GPCGR		150
	ROXBURY TOWNSHIP WATER DEPT.	4500288	4	405430	744010		3.4	27	36	75	GPCGR		300
	ROXBURY TOWNSHIP WATER DEPT.	2513067	5 Inactive	405246	744100		3.9	27	36	100	GPCGR		50
	ROXBURY TOWNSHIP WATER DEPT.	4500289	6 Inactive	405246	744100		3.9	27	36	90	GPCGR		50
	ROXBURY TOWNSHIP WATER DEPT.	2524169	9 Inactive	405300	744130		3.4	27	36	365	GPCGR		80
	ROXBURY TOWNSHIP WATER DEPT.	2526025	10	405225	743955		4.9	27	36	170	GPCGR		65
	ROXBURY TOWNSHIP WATER DEPT.	2524717	11	405225	743955		4.9	27	36	550	GPCGR		17
	ROXBURY TOWNSHIP WATER DEPT.	2529414	12	405450	744029	T	3.0	27	36	82	GOSD		300
5338	ARLINGTON HILLS WATER CO.,INC.	2533916	1A	405419	743833	F	4.8	27	26	99	GOTM		300
	ARLINGTON HILLS WATER CO.,INC.	2536115	2	405421	743833	F	4.8	27	26	91	GOTM		300
5353	ARD MT. OLIVE ASSOCIATES, L.P.	2527269	WELL NO. 1	405215	744328	T	3.6	27	27	350	GPC		100
	ARD MT. OLIVE ASSOCIATES, L.P.	2527268	WELL NO. 2	405215	744378	T	3.6	27	27	400	GPC		100
MR0010	FARM SOLD	POND	1	405135	743930	F	5.8	27	36	8	GSGP		

Number of Observations: 94

DESCRIPTION OF WATER WITHDRAWAL POINTS

The Water Withdrawal Points listing contains the following fields:

CAPACITY: the pump capacity in gallons per minute
COUNTY: county the withdrawal point is in
DEPTH: depth of the well or pond
DISTANCE: distance in miles from center of circle
GEO1: the ground or surface water source
GEO2: a secondary source of the water
LAT: latitude of the withdrawal point
LLACC: accuracy of the latitude and longitude estimates
LOCID: the local identification of the withdrawal point, or a continuation of the SOURCEID field for surface water
LON: longitude of the withdrawal point
MUN: the municipality the withdrawal point is in
NAME: name of the permit, certificate, or registration holder
NUMBER: Water Allocation permit, Agricultural Certification, or Registration number
SOURCEID: the well permit number or other identifier for the water withdrawal

The listing that you have requested includes most wells and surface intakes that are in the Water Allocation Permits, and representative sources from most of the Agricultural Certificates. Recognizing the fact that the list will contain errors and omissions, it is advisable to use this resource as a guide and to verify all data. We try to maintain an accurate database; however, we can not yet guarantee reliability. If you spot any errors we would be very grateful to hear about them. Please call or write to us in reference to the "Radius Program" at:

NJDEP
Division of Water Resources
Bureau of Water Allocation
CN-029
Trenton, NJ 08625

(609) 292-2957

Thank you.

Please see the attached sheets for definitions of the codes used in the Water Withdrawal Points listing.

10/87

CODES USED IN THE WATER WITHDRAWAL POINTS LISTING

This packet contains information on the database codes that the Bureau of Water Allocation uses in the Water Withdrawal Points Listing.

COUNTY:	01 - Atlantic	15 - Gloucester	29 - Ocean
	03 - Bergen	17 - Hudson	31 - Passaic
	05 - Burlington	19 - Hunterdon	33 - Salem
	07 - Camden	21 - Mercer	35 - Somerset
	09 - Cape May	23 - Middlesex	37 - Sussex
	11 - Cumberland	25 - Monmouth	39 - Union
	13 - Essex	27 - Morris	41 - Warren

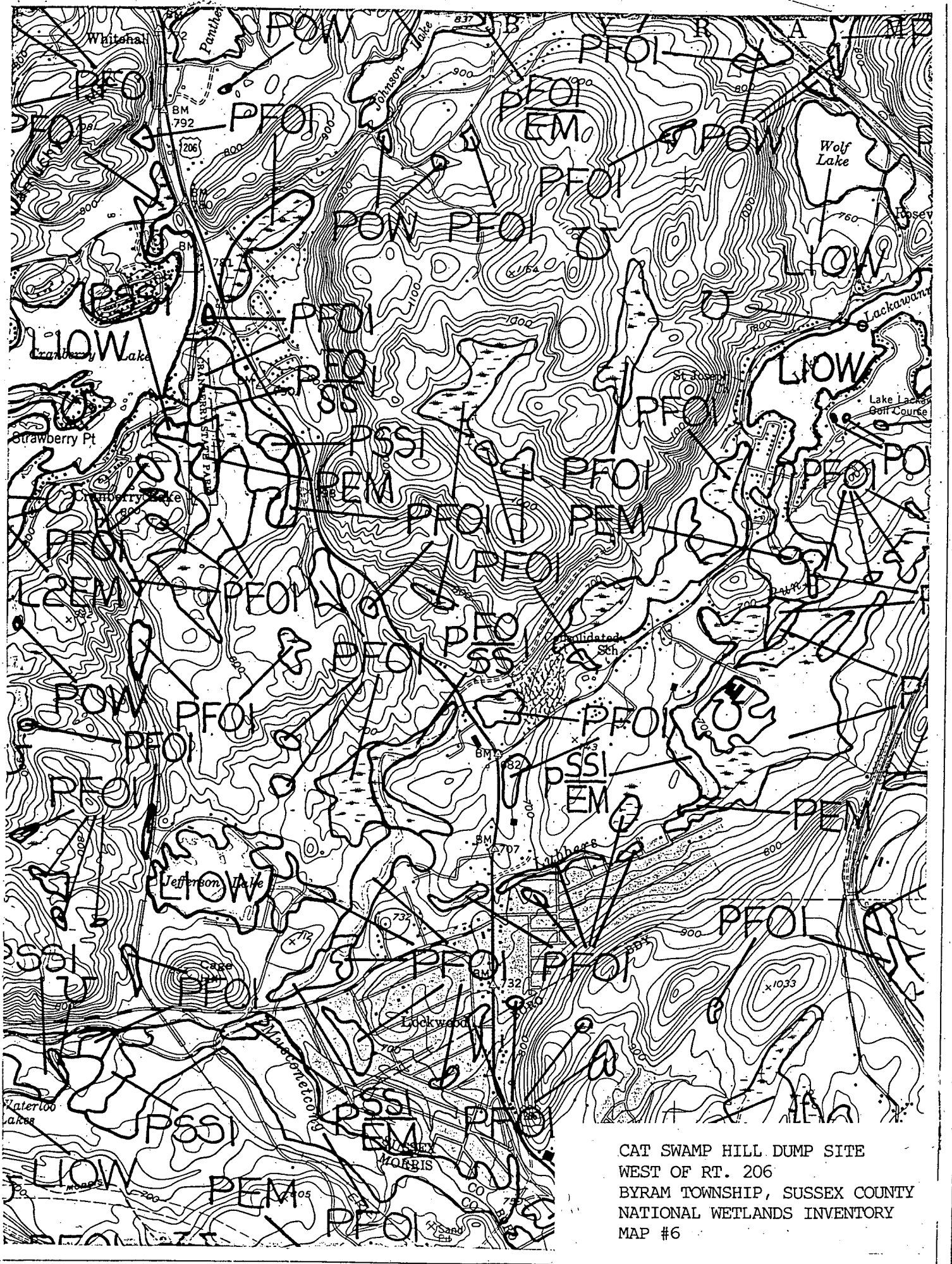
GEO:	RECENT	
	Surficial Deposits	GRS
	PLEISTOCENE	
	Glacial Undifferentiated	GQGU
	Stratified Drift	GQSD
	Terminal Moraine	GQTM
	Bridgeton	GQBS
	Cape May	GQCM
	Holly Beach Mbr.	GQCHB
	Estuarine Sand	GQES
	Pennsauken	GQPS
	TERTIARY	
	Beacon Hill	GTBH
	Cohansey	GTCH
	Cohansey & Kirkwood	GTCK
	Kirkwood	GTKW
	Upper	GTKWU
	Rio Grande	GTKRG
	Lower	GTKWL
	Piney Point Mbr.	GTKPP
	Shark River Marl	GTSR
	Manasquan Marl	GTMQ
	Vincentown Sand	GTVT
	Hornerstown Marl	GTHT
	CRETACEOUS	
	Red Bank	GKRB
	Navesink	GKNS
	Mount Laurel	GKML
	Wenonah	GKWE
	Mount Laurel & Wenonah	GKMW
	Marshalltown	GKMT
	Englishtown	GKET
	Woodbury	GKWB
	Merchantville	GKMV
	Magothy	GKM

Old Bridge	GKROB
Raritan	GKR
Sayreville Sand	GKRSS
Farrington	GKRF
Raritan/Magothy	GKMR
Potomac	GKP
TRIASSIC	
Brunswick Formation	GTRB
Lockatong Formation	GTRL
Stockton Formation	GTRS
Basalt	GTRBS
Diabase	GTRDB
Conglomerate	GTRCG
DEVONIAN	
Undifferentiated	GD
SILURIAN	
Bossardville Limestone	GSBD
Decker Formation	GSDK
Longwood Shale	GSLS
Poxono Island Fm	GSPI
Greenpond Conglomerate	GSGP
High Falls	GSHF
Shawangunk Fm	GSSG
ORDOVICIAN	
Martinsburg Fm	GOMB
Jacksonburg Fm	GOJB
Kittatinny Group	GOK
Outleaunee Fm	GOKO
Harmonyvale Mbr	GOKOH
Beaver Run Mbr	GOKOB
Epler	GOKE
Rickenbach	GOKR
CAMBRO ORDOVICIAN	
Kittatinny Fm	GCOK
CAMBRIAN	
Hardyston Quartzite	GCH
Allentown Fm	GCKA
Upper Mbr	GCKU
Limeport Mbr	GCKLP
Leithsville Fm	GCKL
Walkill Mbr	GCKLW
Hamburg Mbr	GCKLH
Califon Mbr	GCKLC
PRECAMBRIAN	
Granite	GPCGR
Gneiss	GPCGN
Undifferentiated	GPC

Franklin Lms	GPCFL
DELAWARE RIVER BASIN	
Unknown or Non-Specific	SD
Alloways Creek	SDALL
Alexsocken Creek	SDALE
Assiscunk Creek	SDASC
Assunpink Creek	SDASP
Big Timber Creek	SDBIG
Blacks Creek	SDBLA
Cooper's Creek	SDCOO
Crafts Creek	SDCRA
Crosswicks Creek	SDCRO
Delaware River	SDDEL
Flat Brook	SDFLA
Hakihokake Creek	SDHAK
Harihokake Creek	SDHAR
Jacob's Creek	SDJAC
Lockatong Creek	SDLOC
Lopatcong Creek	SDLOP
Mantua Creek	SDMNT
Musconetcong River	SDMUS
Nichisakawick Creek	SDNIC
Old Man's Creek	SDOLD
Paulins Kill	SDPAU
Pennsauken Creek	SDPEN
Pequest River	SDPST
Pohatcong Creek	SDPOH
Raccoon Creek	SDRAC
Rancocas Creek	SDRAN
Salem River	SDSAL
Wickecheoke Creek	SDWIC
RARITAN RIVER BASIN	
Unknown or Non-Specific	SR
Lawrence Brook	SRLAW
Lower Raritan	SRLOW
Millstone River	SRMIL
North Branch Raritan	SRNBR
South Branch Raritan	SRSBR
South River	SRSRV
PASSAIC RIVER BASIN	
Unknown or Non-Specific	SP
Canoe Brook	SPCAN
Lower Mid-Passaic River	SPLMP
Lower Passaic	SPLOW
Passaic River	SPPAS
Peckman River	SPPEC
Pequannock River	SPPNK
Pompton River	SPPOM
Ramapo River	SPRAM
Rockaway River	SPROC
Saddle River	SPSAD

Upper Mid-Passaic River	SPUMP
Upper Passaic River	SPUPP
Wanaque River	SPWAN
Whippany River	SPWHI
ATLANTIC COASTAL BASIN	
Unknown or Non-Specific	SC
Atlantic County Coastal	SCATL
Cape May County Coastal	SCCAP
Cedar Creek	SCCED
Great Egg Harbor River	SCGRE
Manasquan River	SCMSQ
Metedeconk River	SCMET
Monmouth County Coastal	SCMON
Mullica River	SCMUL
Navesink River	SCNAV
Ocean County Coastal	SCOCE
Raritan Bay	SCRAR
Shark River	SCSHA
Shrewsbury River	SCSHR
Toms River	SCTOM
Tuckahoe River	SCTUC
HUDSON RIVER BASIN	
Unknown or Non-Specific	SH
Hudson River	SHHUD
Papakating Creek	SHPAP
Pochuck Creek	SHPOC
Wallkill River	SHWAL
HACKENSACK RIVER BASIN	
Unknown or Non-Specific	SK
Hackensack River	SKHAC
RAHWAY RIVER BASIN	
Unknown or Non-Specific	SY
Rahway River	SYRAH
ELIZABETH RIVER BASIN	
Unknown or Non-Specific	SE
Elizabeth River	SEELI
DELAWARE BAY BASIN	
Unknown or Non-Specific	SB
Cohansey River	SBCOH
Maurice River	SBMAU
Stow Creek	SBSTO

LLACC:
- S - accurate to +- 1 second
- F - accurate to +- 5 seconds
- T - accurate to +- 10 seconds
- M - accurate to +- 1 minute
- U - accuracy unknown



CAT SWAMP HILL DUMP SITE
WEST OF RT. 206
BYRAM TOWNSHIP, SUSSEX COUNTY
NATIONAL WETLANDS INVENTORY
MAP #6

WETLAND LEGEND

U - Primarily represents **upland** areas, but may include unclassified wetlands less than 1 acre in area, non photo-identifiable areas and/or unintentional omissions.

ECOLOGICAL SYSTEM

E - ESTUARINE

Ecological Subsystem	1 - Subtidal					2 - Intertidal						
CLASS	RB - ROCK BOTTOM	UB - UNCONSOLIDATED BOTTOM	AB - AQUATIC BED	RF - REEF	OW - OPEN WATER Unknown Bottom	AB - AQUATIC BED	RF - REEF	FL - FLAT	SB - STREAMBED	RS - ROCKY SHORE	BB - BEACH/BAR	EM - EMERGENT	SS - SCRUB / SHRUB	FO - FORESTED
Subclass	1. Bedrock 2. Boulder	1. Cobble / Gravel 2. Sand 3. Mud 4. Organic	1. Submergent Algal 2. Submergent Vascular 4. Floating leaved 5. Floating 6. Unknown Submergent 7. Unknown Surface	2. Mollusc 3. Worm		1. Submergent Algal 2. Submergent Vascular 6. Unknown Submergent 7. Unknown Surface	2. Mollusc 3. Worm	1. Cobble / Gravel 2. Sand 3. Mud 4. Organic 5. Vegetated Pioneer 6. Vegetated Non-pioneer	1. Cobble / Gravel 2. Sand 3. Mud 4. Organic	1. Bedrock 2. Boulder 6. Vegetated Non-pioneer	1. Cobble / Gravel 2. Sand	1. Persistent 2. Nonpersistent 3. Narrow Leaved Nonpersistent 4. Broad Leaved Nonpersistent 5. Narrow Leaved Persistent 6. Broad Leaved Persistent	1. Broad Leaved Deciduous 3. Broad Leaved Evergreen 4. Needle Leaved Evergreen 5. Dead 6. Deciduous 7. Evergreen 8. White Cedar	1. Broad Leaved Deciduous 3. Broad Leaved Evergreen 4. Needle Leaved Evergreen 5. Dead 6. Deciduous 7. Evergreen 8. White Cedar

ECOLOGICAL SYSTEM

M - MARINE

Ecological Subsystem	1 - Subtidal					2 - Intertidal				
CLASS	RB - ROCK BOTTOM	UB - UNCONSOLIDATED BOTTOM	AB - AQUATIC BED	RF - REEF	OW - OPEN WATER Unknown Bottom	AB - AQUATIC BED	RF - REEF	FL - FLAT	RS - ROCKY SHORE	BB - BEACH/BAR
Subclass	1. Bedrock 2. Boulder	1. Cobble / Gravel 2. Sand 3. Mud 4. Organic	1. Submergent Algal 2. Submergent Vascular 4. Floating leaved 5. Floating 6. Unknown Submergent 7. Unknown Surface	1. Coral 3. Worm		1. Submergent Algal 2. Submergent Vascular 6. Unknown Submergent	1. Coral 3. Worm	1. Cobble/Gravel 2. Sand 3. Mud 6. Vegetated Non-pioneer	1. Bedrock 2. Boulder 6. Vegetated Non-pioneer	1. Cobble/Gravel 2. Sand

ECOLOGICAL SYSTEM

P - PALUSTRINE

No Subsystem									
CLASS	RB - ROCK BOTTOM	UB - UNCONSOLIDATED BOTTOM	AB - AQUATIC BED	FL - FLAT	ML - MOSS LICHEN	EM - EMERGENT	SS - SCRUB / SHRUB	FO - FORESTED	OW - OPEN WATER Unknown Bottom
Subclass	1. Bedrock 2. Boulder	1. Cobble/Gravel 2. Sand 3. Mud 4. Organic	1. Submergent Algal 2. Submergent Vascular 3. Submergent Moss 4. Floating-Leaved 5. Floating 6. Unknown Submergent 7. Unknown Surface	1. Cobble / Gravel 2. Sand 3. Mud 4. Organic 5. Vegetated Pioneer 6. Vegetated Non-pioneer	1. Moss 2.Lichen	1. Persistent 2. Nonpersistent 3. Narrow Leaved Nonpersistent 4. Broad Leaved Nonpersistent 5. Narrow Leaved Persistent 6. Broad Leaved Persistent	1. Broad Leaved Deciduous 2. Needle Leaved Deciduous 3. Broad Leaved Evergreen 4. Needle Leaved Evergreen 5. Dead 6. Deciduous 7. Evergreen 8. White Cedar	1. Broad Leaved Deciduous 2. Needle Leaved Deciduous 3. Broad Leaved Evergreen 4. Needle Leaved Evergreen 5. Dead 6. Deciduous 7. Evergreen 8. White Cedar	

[redacted]LACU[redacted]NE

SYSTEM

Ecological Subsystem

1 - Limnetic

CLASS	RB - ROCK BOTTOM	UB - UNCONSOLIDATED BOTTOM	AB - AQUATIC BED	OW - OPEN WATER Unknown Bottom
Subclass	1. Bedrock 2. Boulder	1. Cobble / Gravel 2. Sand 3. Mud 4. Organic	1. Submergent Algal 2. Submergent Vascular 3. Submergent Moss 4. Floating leaved 5. Floating 6. Unknown Submergent 7. Unknown Surface	

2 - Littoral

CLASS	RB - ROCK BOTTOM	UB - UNCONSOLIDATED BOTTOM	AB - AQUATIC BED	FL - FLAT ROCK	RS - ROCKY SHORE	BB- BEACH BAR	EM - EMERGENT	OP - OPEN WATER Unknown Bottom
Subclass	1. Bedrock 2. Boulder	1. Cobble/Gravel 3. Sand 3. Mud 4. Organic	1. Submergent Algal 2. Submergent Vascular 3. Submergent Moss 4. Floating leaved 5. Floating 6. Unknown Submergent 7. Unknown Surface	1. Cobble/Gravel 2. Sand 3. Mud 4. Organic 5. Vegetated Pioneer 6. Vegetated Non-pioneer	1. Bedrock 2. Boulder	1. Cobble/Gravel 2. Sand	2. Nonpersistent 3. Narrow leaved Nonpersistent 4. Broad leaved Nonpersistent	

R - RIVERINE

Ecological Subsystem

	1. Tidal	2 - Lower Perennial	3 - Upper Perennial	4 - Intermittent	5 - Unkown Perennial
CLASS	EM - EMERGENT(*)	RB - ROCK BOTTOM	UB - UNCONSOLIDATED BOTTOM	AB - AQUATIC BED	FL - FLAT	SB - STREAMBED	RS - ROCKY SHORE	BB - BEACH/BAR	OW - OPEN WATER Unknown Bottom
Subclass	1. Nonpersistent 2. Narrow-leaved Nonpersistent 3. Broad-leaved Nonpersistent	1. Bedrock 2. Boulder	1. Cobble/Gravel 2. Sand 3. Mud 4. Organic	1. Submergent Algal 2. Submergent Vascular 3. Submergent Moss 4. Floating-Leaved 5. Floating 6. Unknown Submergent 7. Unknown Surface	1. Cobble / Gravel 2. Sand 3. Mud 4. Organic 5. Vegetated Pioneer 6. Vegetated Non-pioneer	1. Cobble/Gravel 2. Sand 3. Mud 4. Organic	1. Bedrock 2. Boulder	1. Cobble/Gravel 2. Sand	

(*) EM - EMERGENTS are only found in the Riverine Tidal and Riverine Lower Perenial Ecological Subsystem. All other classes are found in all Riverine Ecological Subsysterns

MODIFYING TERMS

In order to more adequately describe wetland and aquatic habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME(1)

Non-Tidal

- A Temporary
- B Saturated
- C Seasonal
- D Seasonal Well-drained
- E Seasonal Saturated
- F Semipermanent
- G Intermittently Exposed
- H Permanent
- J Intermittently Flooded
- K Artificial
- Z Intermittently Exposed/Permanent
- W Intermittently Flooded/Temporary
- Y Saturated/Semipermanent/Seasonal
- U Unknown

Tidal

- K Artificial
- L Subtidal
- M Irregularly Exposed
- N Regular
- P Irregular
- R Seasonal Tidal
- S Temporary Tidal
- T Semipermanent Tidal
- V Permanent Tidal
- U Unknown

WATER CHEMISTRY

Coastal Salinity

- 1 Hyperhaline
- 2 Euhaline
- 3 Mixohaline (Brackish)
- 4 Polyhaline
- 5 Mesohaline
- 6 Oligohaline
- 0 Fresh

Inland Salinity

- 7 Hypersaline
- 8 Eusaline
- 9 Mixosaline
- 0 Fresh

pH Modifiers for all Fresh Water

- a Acid
- c Circumneutral
- i Alkaline

SOIL

- g Organic
- n Mineral

SPECIAL MODIFIERS

- b Beaver
- d Partially Drained/Ditched
- f Farmed
- h Ditched/Impounded
- r Artificial
- s Spoil
- x Excavated

MODL	Lawns, Stormwater Management Areas (areas are not normally inundated)
MODR	Right-of-Ways (areas maintained by utilities)
MODAg	Agricultural Lands, Turf Farms (both row crop and turf cultivation)
MODD	Disturbed Areas (surface/vegetation disturbed. Nature of activity not readily apparent)

(1) Information on the water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.

KEY TO MAP

500-Year Flood Boundary ——— ZONE B

100-Year Flood Boundary ———

Zone Designations* ZONE A1 / ZONE A5

100-Year Flood Boundary ———

500-Year Flood Boundary ——— ZONE B

Base Flood Elevation Line With Elevation In Feet** ~~~513~~~

Base Flood Elevation in Feet Where Uniform Within Zone** (EL 987)

Elevation Reference Mark RM7×

Zone D Boundary ———— — — — —

River Mile •M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:

FEBRUARY 28, 1975

FLOOD HAZARD BOUNDARY MAP REVISIONS:

NONE

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWNSHIP OF BYRAM, NEW JERSEY. SUSSEX COUNTY

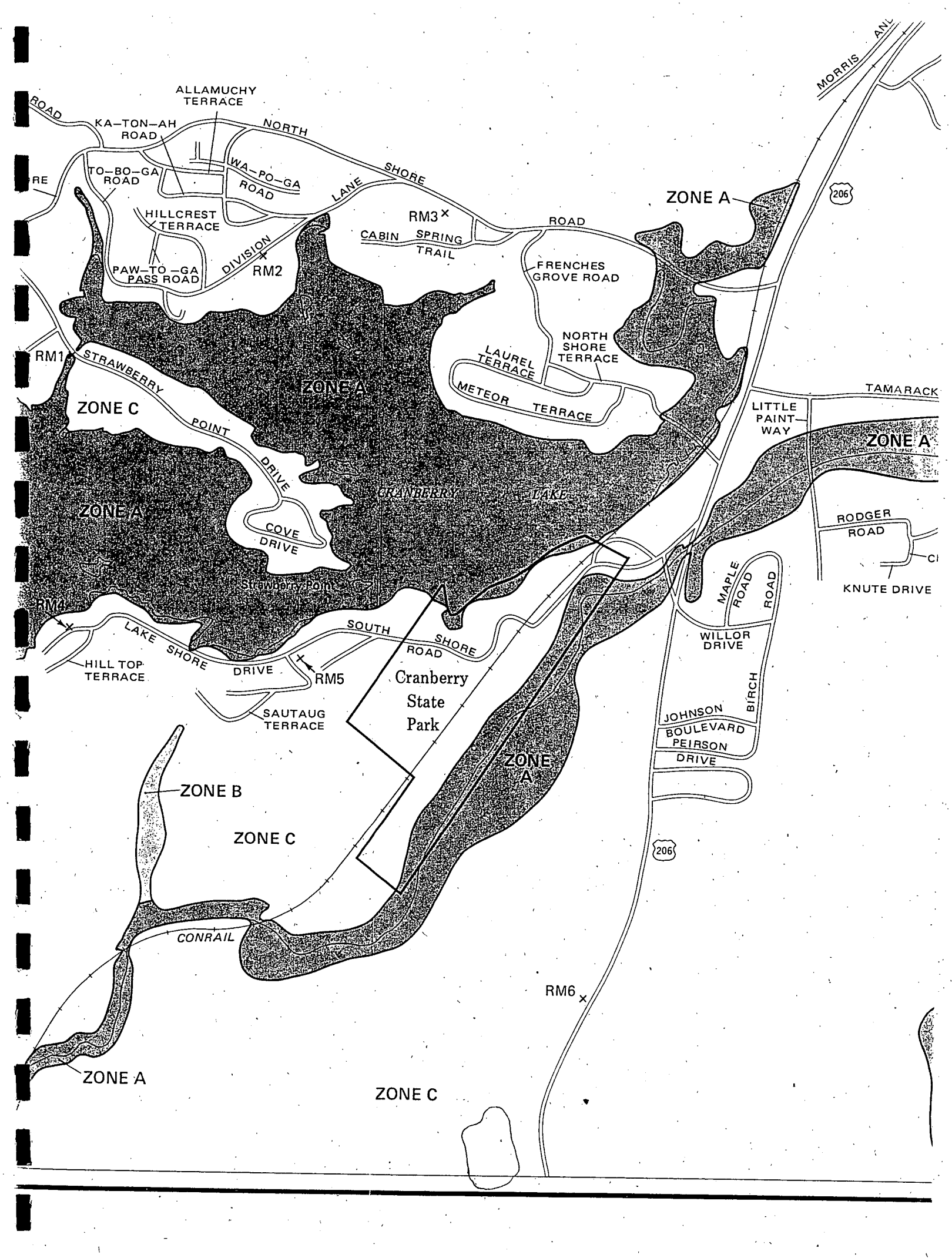
PANEL 5 OF 20

(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
340557 0005 A

EFFECTIVE DATE:
JANUARY 5, 1984

Federal Emergency Management Agency


ALLAMUCHY TERRACE
KA-TON-AH ROAD
NORTH SHORE ROAD
WA-PO-GA ROAD
TO-BO-GA ROAD
HILLCREST TERRACE
PAW-TO-GA PASS ROAD
DIVISION
RM2
RM3
CABIN SPRING TRAIL
FRENCHES GROVE ROAD
ZONE A
206
MORRIS
RM1
STRAWBERRY POINT DRIVE
ZONE C
ZONE A
LAUREL TERRACE
NORTH SHORE TERRACE
METEOR TERRACE
TAMARACK
LITTLE PAINT-WAY
ZONE A
CRANBERRY LAKE
COVE DRIVE
Strawberry Point
RODGER ROAD
KNUTE DRIVE
RM4
LAKE SHORE DRIVE
SOUTH SHORE ROAD
HILL TOP TERRACE
RM5
SAUTAUG TERRACE
Cranberry State Park
MAPLE ROAD
WILLOR DRIVE
BIRCH ROAD
JOHNSON BOULEVARD
PEIRSON DRIVE
ZONE A
ZONE B
ZONE C
206
CONRAIL
RM6
ZONE A
ZONE C

PHOTOGRAPHS

CAT SWAMP HILL DUMP SITE
AKA: SHAWS DUMP
WEST OF ROUTE 206
BYRAM TOWNSHIP, SUSSEX COUNTY, NEW JERSEY

PHOTOGRAPH LOG

1. AREA #1, LOCATION OF SAMPLE S-1

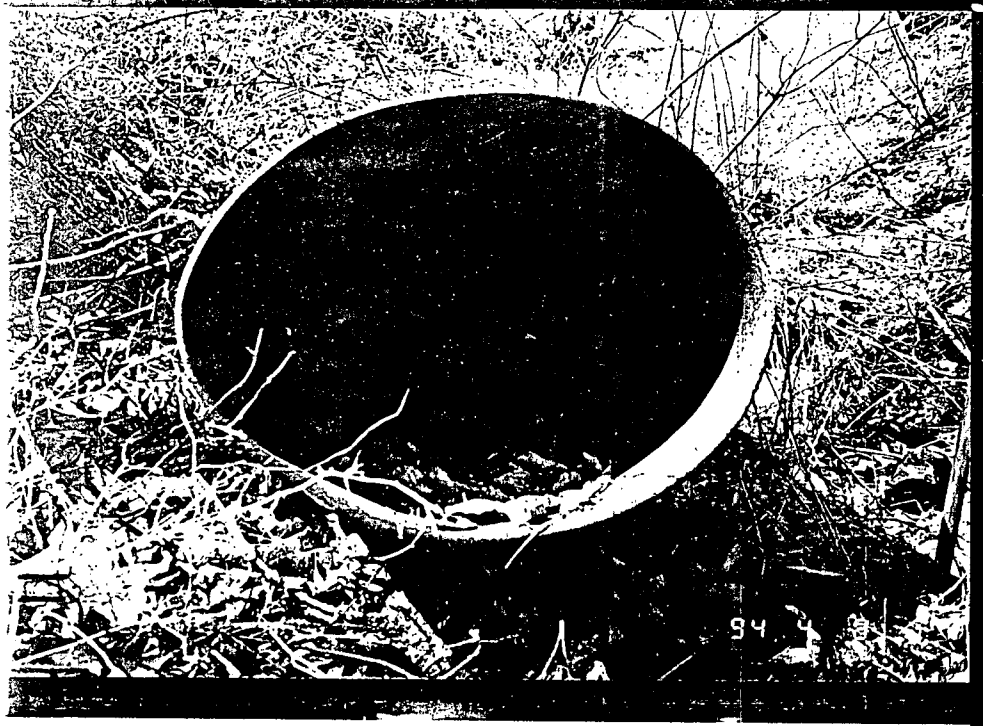
2. AREA #2, LOCATION OF SAMPLES S-3 & S-4

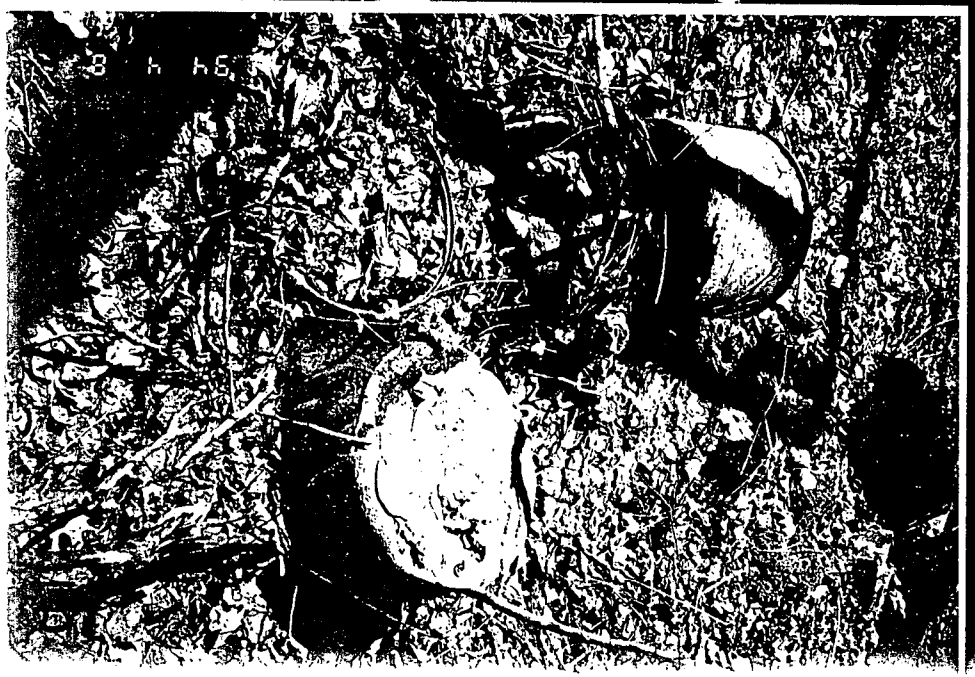
3 - 6. AREA #3, TRENCHES #1 THROUGH #4

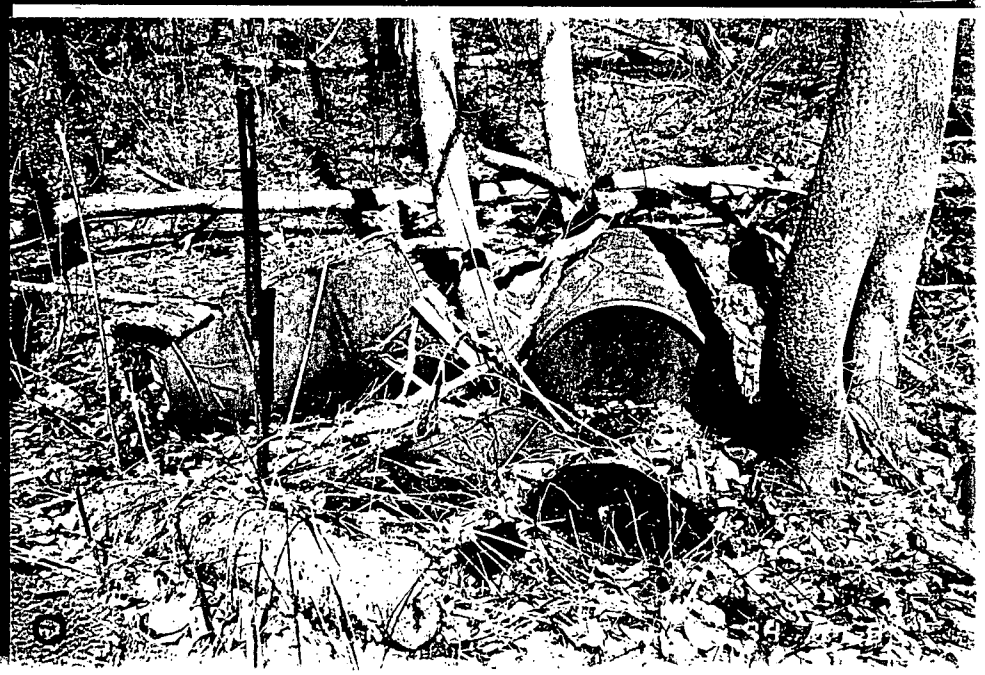
7 - 8. DRUM CARCASSES AND DEBRIS IN THE VICINITY OF S-18 & S-19

9 - 14. PHOTOGRAPHS OF VARIOUS TYPES OF SOLID WASTES AND DEBRIS LANDFILLES THROUGHOUT THE SITE.

15. WETLAND AREA EAST OF THE DUMP SITE.







ATTACHMENT A

TOWNSHIP OF BYRAM
NEW JERSEY

MAILING ADDRESS:
10 MANSFIELD DRIVE
STANHOPE, N.J. 07874
Phone: 201-347-2500

TOWNSHIP OF LAKES

IN ANSWERING PLEASE REPLY TO

SEP 24 1993

Patricia
Give Greg a call & let him know the deal

{NJDEPE case # 93-9-15-1015-bs

should be handled via permitting we are aware of?

September 22, 1993

Gregory Marshall, Director
Divison of Parks and Forestry
NJ DEPE
CN 404
501 East State Street, Floor 4
Trenton, NJ 08625-0404

Dear Mr. Marshall:

The Byram Township Council and the Byram Township Environmental Commission are seeking NJDEPE assistance in investigating a dump-site that operated for about two decades, closing in the mid 1960's, and that reportedly received hazardous industrial waste as well as household waste.

This approximately 10-acre site was located west of Route 206 on Cat Swamp Hill on parcels now owned by a Canadian developer and by your Parks and Forestry Division of the NJDEPE. The Parks and Forestry parcel, which was taken by eminent domain in 1982 to be added to Allamuchy Mountain State Park, is Block 366, Lot 3, 225.46 acres.

As the enclosed maps show, the southernmost fringe of the dump (perhaps 3.5 to 4 acres) lies on this NJDEPE parcel. Based on a 1973 aerial photo and tax maps, several long trenches that were dug to receive both household and industrial waste are partly located on the NJDEPE parcel, as are numerous large bales of insulating material that may contain asbestos. These bales are scattered over the surface of the entire site and were reportedly also dumped in the trenches and then covered with household refuse and soil.

Our information about the dump comes from several sources. In addition to the 1973 aerial photo, there are photos available from 1959 and 1963 showing the gradual enlargement of the site from about 5-6 acres in 1959 to the full 10 acres in 1963. All three aerial photos are available at Robinson Aerial Survey in Newton. The township had Robinson make two ten-fold enlargements of the 1973 photo; one is on file with the Environmental Commission; the other has been sent to the NJDEPE Division of Parks and Forestry. The two earlier photos are less fine but could be enlarged perhaps five-fold.

ATTACHMENT A1

The 1973 enlargement clearly shows many of the trenches and bales, as well as old automobiles and also bull-dozer marks where waste was pushed in a southerly and easterly direction into the swamp that borders the site.

Another swamp lies to the north; and much of the area is underlain by glacial deposits, some of it sand and gravel and very susceptible to contamination. Several of Byram's small water companies to the northwest, northeast and south of the site have, in the past decade or two, shown contamination by volatile organics such as trichloroethane.

Members of the township Council and the Environmental Commission have walked the site at least three times in the past year, taking along a hunter who belonged to a hunting club that used the area in the 1970's and a former truck driver who brought in insulating and furnace waste from the Mineral Wool company in Stanhope (now called the United States Mineral Products Company). The Commission has also interviewed a bull-dozer driver who worked at the dump part-time for two years in 1958 and 1959.

Many other residents are familiar with the site and used it themselves for household or construction waste. When the site was recently being considered for townhouse and industrial-commerical development, these people came to township meetings to describe the industrial dumping.

Most of these people believed the site posed no problems as long as it wasn't disturbed, but the Council and the Environmental Commission are worried about possible groundwater contamination as well as surface disturbance of any asbestos.

These residents all tell similar stories--regular dumping from the Mineral Wool company; tanker trucks pouring liquid industrial waste into the trenches, sometimes lined up along Route 206 waiting to enter the site. The bull-dozer driver said most of the refuse was household waste interlayed with Mineral Wool waste (insulating materials, fireproofing materials, and furnace waste resulting from burning slag to make rock wool). But during his two-year part-time job, he also saw "an awful lot of drums" dumped there, including at least two or three flatbed trucks stacked with 50-gallon drums which were dumped into the trenches and other excavations. This man said the trenches were dug to get cover soil to put over the garbage. Because this is an area of thin soils, the trenches were dug all the way down to bedrock (eliminating even the modest benefits of soil to confine any liquid industrial wastes).

We know the name of the man who owned the dump and are trying to find his current address and phone number in Florida, where he is said to reside.

The hunter who walked the site with us tells also of sinking into an area where the dump meets the swamp and pulling his leg out to find it "covered with silver".

ATTACHMENT A2

The Environmental Commission, the Council and Planning Board are on good terms with the Canadian developer, who is not obstructing our attempts to determine what may be in this dump and whether any groundwater contamination has occurred. However, he is anxious to proceed with development. The Environmental Commission and Council would like to have the site investigated and groundwater quality thoroughly monitored before any specific plans are discussed before the Planning Board.

Copies of this letter and the maps have also been sent to NJDEPE Acting Commissioner Jeanne Fox, Assistant Commissioner for Natural and Historic Resources James Hall, Assistant Commissioner of Site Remediation Lance Miller, Director of Publicly Funded Site Remediation Anthony Farro, Chief Joseph Mikulka at the Northern Bureau of Regional Enforcement in Parsippany, Sussex County Plannng Director Fred Suljic, Parks Superintendent Bart Wallin and to all pertinent Byram Township officials and the Canadian developer, Larry Wainberg.

We look forward to your reply.

Yours truly,

Margaret M-Garrity

Margaret McGarrity, Chairwoman
Byram Township Environmental Commission

Ronald F. Gatti

Ronald F. Gatti, Manager
Township of Byram

ATTACHMENT A3

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
DISCHARGE RESPONSE ELEMENT
BUREAU OF FIELD OPERATIONS - NORTHERN FIELD OFFICE
1259 RTE. 46, BLDG. 2, PARSIPPANY, NJ 07054
TELEPHONE (201) 299-7570 TELEFAX (201) 299-7575

M E M O R A N D U M

TO: Bob Van Fossen, Acting Assistant Director **DATE:** 10/28/93

FROM: John Zisa, NFO

THROUGH: Yacoub E. Yacoub, Section Chief

THROUGH: Vince Krisak, Acting Bureau Chief

SUBJECT: Cat Swamp Hill Dumpsite - Route 206
Byram Township, Sussex County
DRPSR Case No. 93-9-15-1015-25N

On September 22, 1993 a letter (see attached) was sent to the Division of Parks and Forestry outlining potential environmental concerns discovered in Byram Township. The letter was sent to a number of different bureaus within the Department. An official incident report to the "hotline" was made by the Byram Township Environmental Commission. That incident was assigned to NFO.

An initial site investigation was conducted on 10/27/93, in conjunction with Margaret McGarrity of the Byram Environmental Commission and Councilman Charles Vitale. The site was found to be an abandoned dump site. Several exposed and partially exposed 55 gallon drums were noted. It is unknown if these drums contained anything. Other debris was observed at the site. It is alleged that large quantities of asbestos have been dumped at the site. This could not be verified. Potential environmental and health related concerns were clearly evident at the site.

Approximately 2/3 of the site is currently owned by a Canadian Developer, who plans to construct townhouses at the site. The remainder of the property is State owned parkland (Allamuchy State Park). Dumping was ceased at the site approximately 20 years ago. A viable RP may no longer be available. An MOA was, however, offered to the Canadian Developer. This was done by Site Assessment, who also received a copy of the report. A response to the MOA has not yet been received.

The State owned portion of the dump site must be addressed as well, and would not be covered under the developer MOA. It is recommended that DRPSR management discuss this matter with Parks and Forestry. At a minimum this is a solid waste issue and possibly involves hazardous materials.

Due to a lack of information regarding the site, an accurate RPS score may not be possible at this time. Local residents are extremely concerned that this site may be contributing to groundwater contamination that has been identified in several nearby municipal wells. Should the developer fail to respond favorably to the MOA, the NFO recommends that this case be transferred through Site Assessment to DPFSR so that a preliminary assessment can be performed by Ken Kloo's group. The information learned will aid in properly scoring the site, and will allow for public funds to be utilized in the event they are needed. Due to public and local governmental involvement in this issue, the referral/assessment process should be expedited.

ATTACHMENT A4

New Jersey Department of Environmental Protection BFO-N
COMMUNICATIONS CENTER NOTIFICATION REPORT

Received: 9/15/93
Operator:JIMH
TD Log # 15729
Case # 93-9-15-1015-25

Notification Type: Citizen

Reported By MARGRET MCCARRITY
Affiliation ENVIROMENTAL COMMI
Phone 201-347-2358
Street Address
Municipality
State

Incident Location: Other
Site BLOCK 366 LOT 3
Street Address WEST OF RT 206
Municipality BYRAM TWP
Phone
County SUSSEX
State NJ
Location Type Rural
Incident Date
Time

Substance Released SOIL CONTAMINATED W/ UNKNOWN MATERIAL
Amount Released ( )UNK
ID:Known State Solid CAS#
Additional Substances
Release Is Terminated
Substance Contained? U Hazardous Material? Y TCPA? U A310 Letter? Y
COMU CODE: 1904 REF CODE: 001

JOHN 25A C-1 WALK THRU

Incident Description HISTORICAL SPILLS

Injuries? N Public Evac? N Facility Evac? N Public Exposure? U
Police On Scene? N Firemen On Scene? N DEP Requested? Y Wind Sp/Dir

Contamination Of Land/Water Receiving Water UNK
Status At Scene PRCPERTY CONTAMINATED IN 60'S PART OF LAND OWNED BY DEVELOPER LARRY WAINBERG , AND PART BY DEPE

Responsible Party UnKnown
Party
Contact
Phone
Street Address
Municipality
Title
County
State

OFFICIALS NOTIFIED

	NAME	TITLE	PHONE	DATE	TIME
NJSP :	NJSP/OEM	FAXED		9/15	
MUNIC:	BYRAM TWP	SECY TINA	201-347-4008	9/15	1027
OTHER:					

	Name	Affiliation	Method	Date	Time	T/M
1.		DRPSR ERI	Faxed,Mailed	9/15		B
2.						
3.						

COMMENTS

CAT SWAMP ROAD

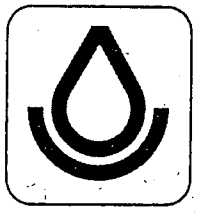
U040A100

ATTACHMENT A5

ATTACHMENT B

SOIL SURVEY OF

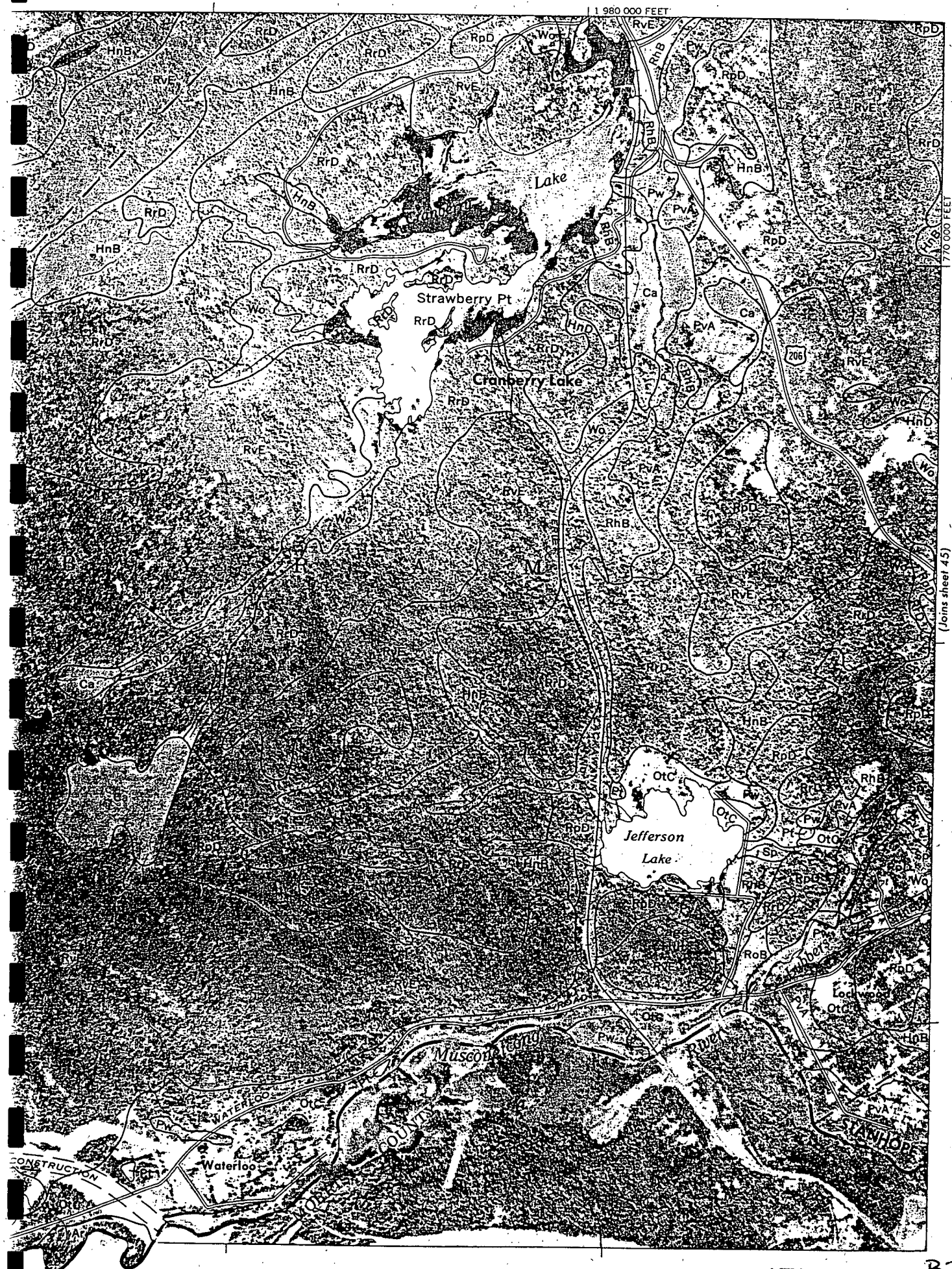
Sussex County, New Jersey



United States Department of Agriculture
Soil Conservation Service

in cooperation with
New Jersey Agricultural Experiment Station
and Cook College
Rutgers University

ATTACHMENT B1



SUSSEX COUNTY, NEW JERSEY NO. 44

ATTACHMENT B2

Representative profile of Riverhead sandy loam, 3 to 8 percent slopes, at the intersection of Route 206 and Lake Lackawanna Road, in a field:

Ap—0 to 7 inches, very dark grayish-brown (10YR 3/2) sandy loam; weak, fine, granular structure; very friable; 10 percent fine to medium gravel; strongly acid; clear, wavy boundary.

B—7 to 30 inches, strong-brown (7.5YR 5/6) sandy loam; weak, medium, subangular blocky structure; friable; 10 percent gravel; strongly acid; gradual, irregular boundary.

C—30 to 60 inches, light yellowish-brown (2.5Y 6/4), stratified loamy sand; single grain; loose; 10 percent gravel; strongly acid.

The solum is 22 to 36 inches thick over sand containing some gravel. Depth to bedrock is more than 6 feet. The gravel content ranges from 0 to 15 percent in the solum and from 5 to 35 percent in the C horizon. Unless limed, these soils are strongly acid.

The Ap horizon is 10YR in hue, 3 or 4 in value, and 2 in chroma. The B horizon is 7.5YR to 10YR in hue, 4 or 5 in value, and 4 to 6 in chroma. The B horizon is dominantly sandy loam but ranges to loamy sand in the lower part of some profiles. The C horizon is 10YR to 2.5Y in hue, 5 or 6 in value, and 4 to 6 in chroma. The C horizon is stratified loamy sand, sand, or gravelly sand.

Riverhead soils are associated with Pompton, Otisville, Preakness, and Rockaway soils. They do not have the mottles that are common in Pompton soils and the grayish-brown B horizon that is common in Preakness soils. They contain more clay and less gravel and sand than Otisville soils. They do not have the fragipan that is common in Rockaway soils.

Riverhead sandy loam, 3 to 8 percent slopes (RhB).—he profile of this soil is the one described as representa-ve of the series. Included in mapping are small areas where the surface layer is loam, many areas where the content of gravel ranges to 25 percent, and areas of nearly vel soils.

This soil is used for alfalfa, corn, vegetables, and fruit. Capability unit IIe–7; woodland group 3o1.

Riverhead sandy loam, 8 to 25 percent slopes (RhC).—he profile of this soil is similar to the one described as presentative of the series, but the depth to the substra-um is 20 to 24 inches. Included in mapping are areas of Otisville gravelly loamy sand and areas where the con-nt of gravel ranges to 25 percent.

This soil is used for hay, silage crops, and fruit. Runoff s medium or rapid. The hazard of erosion is moderately evere. Erosion control is needed in cultivated areas. pability unit IVe–15; woodland group 3r1.

ockaway Series

The Rockaway series consists of deep, well-drained, tly sloping to very steep soils that have a fragipan the lower part of the subsoil. These soils formed in oarse-textured or moderately coarse textured glacial till. ey are on uplands.

n a representative profile the plow layer is dark rayish-brown gravelly loam 7 inches thick. The upper 3 inches of the subsoil is yellowish-brown, strong-brown, dark-brown gravelly loam. The lower part is a fragi- of very firm, dark-brown and yellowish-brown ravelly sandy loam 14 inches thick. The substratum to depth of 65 inches is very firm, light yellowish-brown velly sandy loam.

vailable water capacity is moderate above the very m, brittle fragipan. Permeability is moderately rapid above the fragipan and slow in the pan. Natural fertility is moderate. Root penetration is restricted in the fragipan.

Most of the acreage is wooded or idle. The less sloping nonstony soils are suited to corn, fruit trees, hay, and pasture.

Representative profile of Rockaway gravelly loam, 3 to 8 percent slopes, in Sparta Township, ¼ mile south of Saint Mary's Episcopal Church, 100 feet west of Conestoga Trail, in a hayfield:

Ap—0 to 7 inches, dark grayish-brown (10YR 4/2) gravelly loam; weak, medium, granular structure; friable; many fine and medium roots; many medium and coarse pores; 20 percent gravel; medium acid; clear, smooth boundary.

B1—7 to 11 inches, yellowish-brown (10YR 5/6) gravelly loam; weak, medium, subangular blocky structure; friable; many fine and medium roots; many medium pores; 20 percent gravel; strongly acid; gradual, wavy boundary.

B21t—11 to 18 inches, strong-brown (7.5YR 5/6) gravelly loam; moderate, medium, subangular blocky structure; friable, slightly sticky when wet; weak clay bridging and thin patchy clay films on ped faces; many roots; many fine and medium pores; 15 percent gravel; strongly acid; gradual, wavy boundary.

B22t—18 to 30 inches, dark-brown (7.5YR 4/4) gravelly loam; moderate, coarse, subangular blocky structure; moderately firm; bridging and pore filling common; thin discontinuous clay films on many ped faces and on pebbles; few large and many fibrous roots; few large pores; 20 percent gravel; strongly acid; gradual, wavy boundary.

Bx—30 to 44 inches, dark-brown (7.5YR 4/4) and yellowish-brown (10YR 5/4) gravelly sandy loam; massive; very firm and brittle; most pores filled; patchy thin to thick clay films on ped faces; few roots; 25 percent gravel and cobblestones; strongly acid; diffuse, irregular boundary.

Cx—44 to 65 inches, light yellowish-brown (10YR 6/4) gravelly sandy loam; few, coarse, faint, light brownish-gray (2.5Y 6/2) and yellowish-brown (10YR 5/6) mottles; massive; very firm and brittle; 35 percent gravel and cobblestones; strongly acid.

The solum ranges from 30 to 50 inches in thickness. Depth to the fragipan ranges from 20 to 30 inches. Depth to gneissic bedrock is generally 48 inches or more and in places ranges to 10 feet or more. Unless limed, these soils are dominantly strongly acid. The content of coarse fragments ranges from 10 to 35 percent in the solum and to as much as 50 percent in the C horizon.

The A1 horizon, where present, has a hue of 10YR or 7.5YR, a value of 3, and a chroma of 2 or 3. It ranges from 1 to 3 inches in thickness. The Ap horizon has a hue of 10YR or 7.5YR, a value of 4, and a chroma of 2 or 3. The B1 and B2t horizons have a hue of 10YR or 7.5YR, a value of 4 or 5, and a chroma of 4 to 6. These horizons range from gravelly loam to gravelly sandy loam. The Bx horizon matrix has a hue of 7.5YR or 10YR, a value of 4 or 5, and a chroma of 4 to 6. It is sandy loam or loam and in places is gravelly. The Bx and Cx horizons are firm to very firm and brittle.

Rockaway soils are associated with Hibernia, Whitman, and Riverhead soils. They do not have the grayish mottles in the upper part of the B horizon that are common in Hibernia soils. They do not have the gray colors that are common in Whitman soils. They have a fragipan and Riverhead soils do not. They do not have the loose, stratified gravelly and sandy C horizon that Riverhead soils have.

Rockaway gravelly loam, 3 to 8 percent slopes (RoB).—The profile of this soil is the one described as representative of the series. Included in mapping are two similar soils. One of these soils has a medium acid subsoil, and the other lacks a fragipan. Both are inextensive and are

ATTACHMENT B3

ar to this Rockaway soil in limitations and man-ment. Also included are areas of Hibernia soils and s of Rockaway very stony loam. The Hibernia soils ly occur at the base of steeper slopes and make up 15 percent of the area.

his soil is used for row crops, hay, pasture, and wood-l. Many areas are now idle and are reverting to wood-or are used for community development purposes. hazard of erosion is moderate. Erosion control is ed in cultivated areas. Capability unit IIe–3; wood-l group 3o1.

ckaway gravelly loam, 8 to 15 percent slopes—Included with this soil in mapping in some areas two similar soils. One of these soils has a medium subsoil, and the other does not have a fragipan. Both extensive and are similar to this Rockaway soil in tions and management. Also included are spots of kaway very stony loam. Small seep areas occur where slope changes.

s soil is used for row crops, hay, pasture, and wood-Many areas are reverting to woodland. Runoff is ium. The hazard of erosion is moderate. Erosion rol is needed in cultivated areas. Capability unit ; woodland group 3o1.

kaway gravelly loam, 15 to 25 percent slopes—The profile of this soil is similar to the one de-ed as representative of the series, but the depth to agipan is slightly less. Included in mapping are areas of Rockaway very stony loam and Rock out-. Also included in some areas are two similar soils; has a medium acid subsoil, and the other does not fragipan. Both are inextensive and are similar to ockaway soil in limitations and management. Con-pockets and places where the slope changes tend seepy.

s soil is used for hay, pasture, woodland, and infre-row crops. Many areas are idle. Runoff is rapid. hazard of erosion is severe in cultivated areas. Ero-control is needed. Capability unit IVe–3; woodland 3r1.

kaway very stony loam, 5 to 25 percent slopes—The profile of this soil is similar to the one de-d as representative of the series, but the content es, 5 to 30 feet apart, is about 3 percent in the layer and subsoil. Included in mapping are small ve pockets that collect water and areas of Rock-loam. Also included in some areas are two similar ne has a medium acid subsoil, and the other does ve a fragipan. Both are inextensive and are simi-this Rockaway soil in limitations and management. soil is used for woodland and pasture and as ual home sites. In the less sloping areas, the stone is the primary limitation for intensive use. Capa-unit VIs–19; woodland group 3r1.

away very stony loam, 25 to 40 percent slopes The profile of this soil is similar to the one de-d as representative of the series, but it contains 5 to 30 feet apart, and about 3 percent of the area is covered with stones. Included in mapping similar soils; one has a medium acid subsoil, e other does not have a fragipan. Both are inex-and are similar to this Rockaway soil in limita-tions and management. Small areas of Rock outcrop are also included.

This soil is used for woodland. Steep slopes and the high stone content severely limit the use of this soil for most other uses. Capability unit VIIs–21; woodland group 3r1.

Rockaway-Rock outcrop association, sloping and moderately steep (RrD).—This association is 25 to 40 percent bedrock outcrop or soil material less than 10 inches thick over bedrock and 30 to 45 percent stony to extremely stony Rockaway soils. Slopes range from 8 to 25 percent. Included in mapping are small areas of similar soils where bedrock is at a depth of 10 to 40 inches and elongated, narrow areas of gently sloping soils along the ridge crests. Also included in depressions and seep areas are spots of Whitman and Hibernia soils and muck.

Most of this association is wooded. Some areas are used for pasture. The Rock outcrop and shallow soils, the content of stones, and the steep slopes make this association unsuitable for cultivation. Capability unit VIIs–21; woodland group 3x1.

Rock Outcrop

Rock outcrop is extensive in areas of steep Oquaga soils and very steep Nassau soils. Three mapping units that are predominantly Rock outcrop are described in the paragraphs that follow.

Rock outcrop-Nassau association, very steep (RsF).—This association is 30 to 60 percent Rock outcrop, rubble, or soil material less than 10 inches thick and 30 to 60 percent Nassau soils. Slopes range from 25 to 45 percent. In some areas, the Rock outcrop is a 6- to 12-inch ledge at the top of steep Nassau soils. In 10 percent of the areas, Rock outcrop forms almost vertical cliffs, many feet above the surface. The outcrops are separated only by very narrow areas.

This association is used for pasture, woodland, and watershed protection. Woodland and pasture production are severely restricted by Rock outcrop. Capability unit VIIIs–23; woodland group 5x1.

Rock outcrop-Oquaga association, steep (RtE).—This association is 40 to 60 percent bedrock outcrop, rock rubble, or soil material less than 10 inches thick and 20 to 35 percent extremely stony Oquaga soils. Slopes range from 25 to 35 percent. Bedrock is generally alined in a northeast to southwest direction. The bedrock faces have cracks and crevices that are filled or partly filled with soil material, in which trees and shrubs grow. The Oquaga soils are on the lower slopes. Included in mapping are small areas of extremely stony Lackawanna and Swartswood soils in narrow areas, like steps, between bedrock outcrop. Also included are small areas of very steep or moderately steep Rock outcrop or soils.

Most of this association is in State forests, camps, recreation areas, and private woodland. Capability unit VIIIs–23; woodland group 3x1.

Rock outcrop-Rockaway association, steep (RvE).—This association is 70 to 90 percent bedrock outcrop, rock rubble, or soil material less than 10 inches thick and 5 to 20 percent extremely stony Rockaway soils. Slopes range from 25 to 35 percent. The Rockaway soils occupy

ATTACHMENT B4

s steep areas at the base of slopes and elongated ridge ests. The bedrock faces have cracks that are filled or artly filled with soil material, in which trees and shrubs w. Included in mapping are areas of soils where the th to bedrock is 10 to 40 inches and some wet spots.

This association is used for watershed protection and ecreation, such as hiking and skiing, where the Rock tcrop is not too numerous. Woodland production is erely limited because stands are of low density and rvesting is difficult. Residential sites are seriously restricted because the abundant rock outcrop and the steep pes make the area inaccessible and severely limit septic k systems. Capability unit VIIIs–23; woodland group 1.

an Series

he Sloan series consists of deep, level and nearly level, ery poorly drained soils. These soils formed in alluvium hed from nearby uplands. They are on flood plains g the Wallkill, Paulins Kill, and Pequest Rivers and g some of the major streams in the county. These flood lains are subject to frequent, generally annual, flooding.

In a representative profile the surface layer is black loam 10 inches thick. The subsoil is distinctly mot- gray silty clay loam 30 inches thick. The substratum a depth of 60 inches is mottled, gray gravelly sandy m.

vailable water capacity is high. Permeability is mod- e. Natural fertility is high. Typically, the water table at or near the surface most of the year.

ost of the acreage is wooded. Most of the cleared ge is pastured because flooding is a hazard. Corn is wn in the few areas that are not flooded every year. proving drainage is difficult.

epresentative profile of Sloan silt loam, in an area loan and Wayland silt loams, ½ mile east of inter- on of County Routes No. 94 and 15, at Lafayette, 00 feet south of bridge on State Route No. 94 over ins Kill, between old railroad bed and river:

11—0 to 10 inches, black (10YR 2/1) silt loam; moderate, medium, granular structure; friable; very sticky; slightly acid; abrupt, smooth boundary.

12—10 to 15 inches, very dark gray (10YR 3/1) silt loam; moderate, medium, subangular blocky structure; friable; sticky to very sticky; slightly acid; gradual, wavy boundary.

B2g—15 to 32 inches, gray (10YR 5/1) silty clay loam; common, fine, distinct, dark yellowish-brown (10YR 4/4) and yellowish-brown (10YR 5/6) mottles; moderate, medium, angular blocky structure; slightly firm; sticky and plastic; neutral; gradual, wavy boundary.

B3g—32 to 45 inches, gray (5Y 5/1) silty clay loam; many, distinct, dark yellowish-brown (10YR 4/4) and brownish-yellow (10YR 6/6) mottles; weak, medium, angular blocky structure; friable and sticky; neutral; gradual, wavy boundary.

IICg—45 to 60 inches, gray (5Y 5/1) gravelly sandy loam; many, coarse, distinct, yellowish-brown (10YR 5/6) and brownish-yellow (10YR 6/6) mottles; massive; friable; mildly alkaline.

The solum is 30 inches or more thick. The alluvial deposits e more than 40 inches thick over stratified material. Small ounts of gravel are present in the lower part of some ls. Reaction ranges from slightly acid in the A horizon to mildly alkaline in the C horizon.

The A1 horizon has a hue of 10YR, a value of 2 or 3, and a chroma of 1 or 2. The B horizon is dominantly gray; hue ranges from 5Y to 10YR, value is 4 or 5, and chroma is 1 or 2. It contains mottles that have a hue of 10YR, a value of 4 to 6, and a chroma of 4 or 6. The B horizon is dominantly silty clay loam, but is silt loam in places. It has weak to moderate, medium to coarse, subangular and angular blocky structure and moderate, medium, prismatic structure. The IIC horizon is stratified with varying textures. It is gleyed and mottled.

Sloan soils are associated with Wayland and Carlisle soils. In contrast with Wayland soils, they have a gray B horizon. They have a thicker A horizon than Wayland soils. They have more mineral and less organic material than Carlisle soils.

Sloan and Wayland silt loams (Sm).—Most areas are nearly equal parts of Sloan and Wayland soils. Some are dominantly one or the other. These soils are in low positions on the landscape. Included in mapping are small areas of loamy, sandy, gravelly, and other better drained soils. Also included are a few small isolated areas of Carlisle soils or other shallow organic soils.

Most of the acreage is used for summer pasture, woodland, and wetland wildlife. Wild grasses, sedges, and reeds and red maple, elm, ash, and white oak trees are most abundant in undrained areas. Outlets for improved drainage systems are generally not available. Capability unit VIw–46; woodland group 4w1.

Swamp

Swamp (Sp) is low land where the water table is at the surface at least 10 months of the year. It is along sluggish streams and drainageways, in low areas that have poor surface outlets and a very high water table, and in areas around natural ponds. The surface layer is very dark gray or gray. The texture of the surface layer and content of organic matter are highly variable. The subsurface layer ranges from coarse to fine. The subsurface layer and underlying material contain a layer that is firm, but not necessarily brittle. Some areas are stony, but rarely very stony or extremely stony.

Swamp maple is a dominant natural species; some areas have many dead or dying trees. This mapping unit has potential for wetland wildlife habitat development. Most areas are natural water retention and storage areas. Capability unit VIIIw–37; woodland group 5w1.

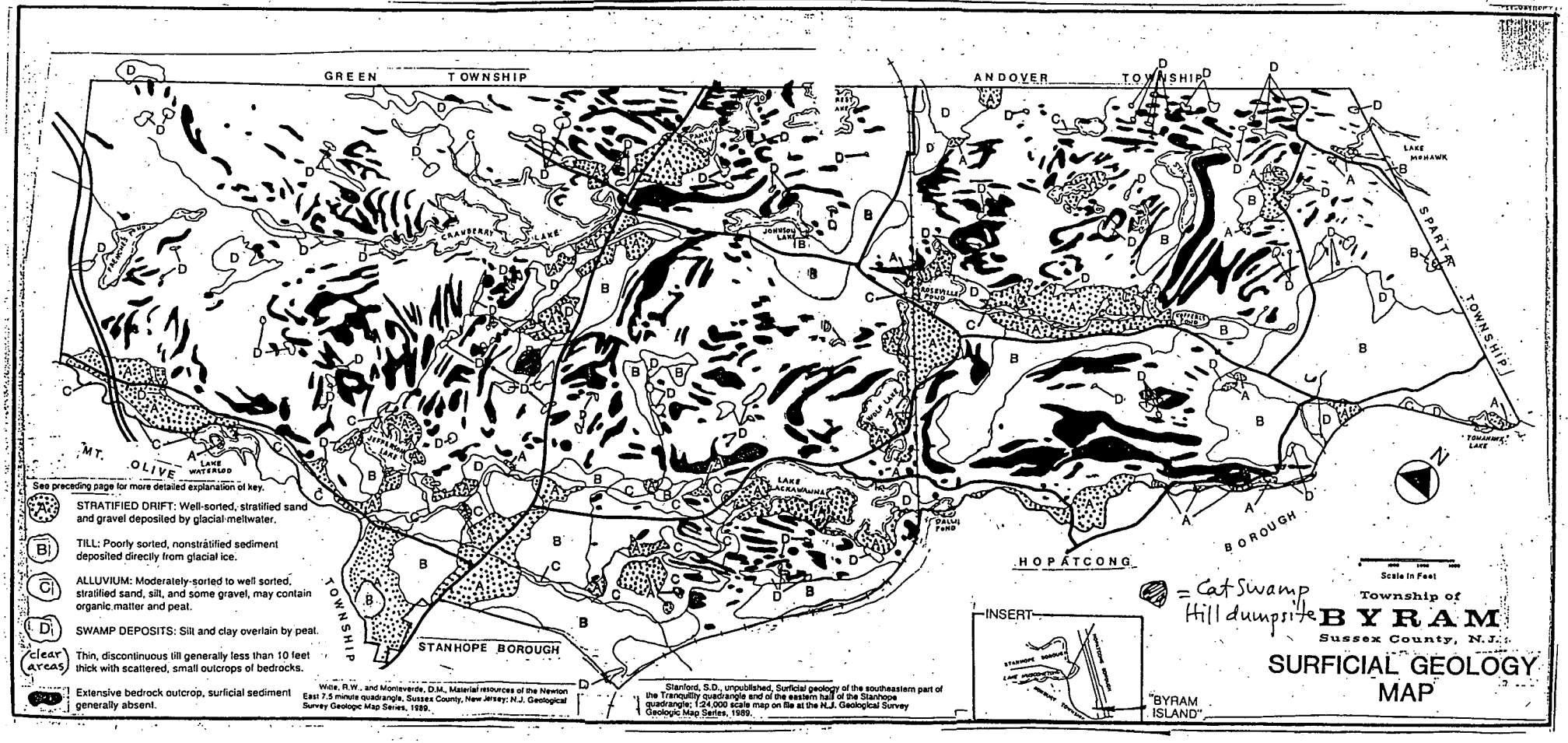
Swartswood Series

The Swartswood series consists of deep, well-drained, gently sloping to very steep soils that have a fragipan in the lower part of the subsoil. These soils formed in glacial till derived chiefly from gray and brown quartzite, conglomerate, and sandstone.

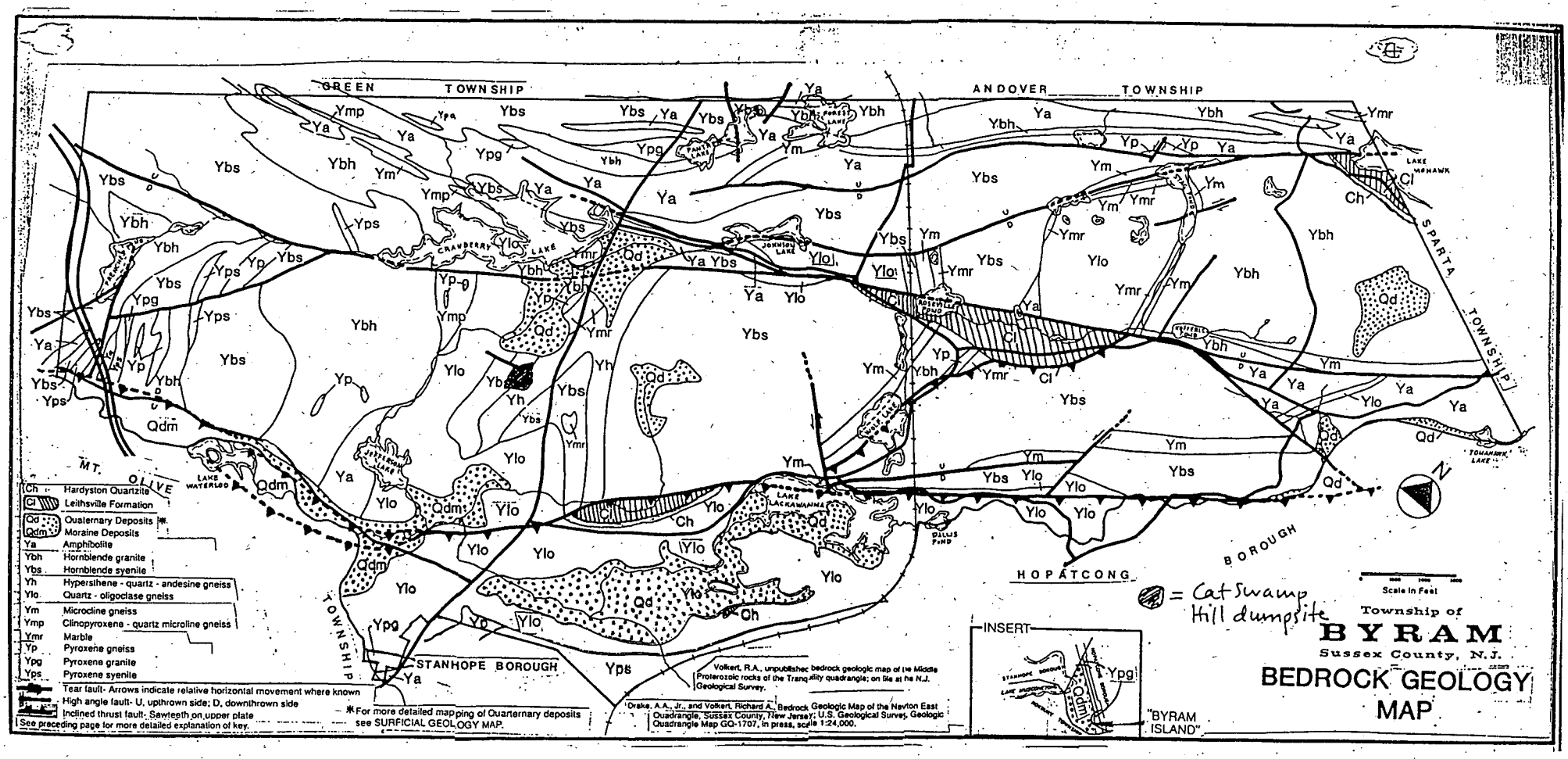
In a representative profile in a wooded area, a 2-inch layer of partly decomposed leaf litter and black or dark-brown organic material overlies the mineral soil. The next layer is 2 inches of grayish-brown very stony sandy loam. The upper 28 inches of the subsoil is yellowish-brown very stony gravelly loam or very stony gravelly sandy loam. The lower part to a depth of 60 inches is a fragipan of very firm, brittle, dark-brown gravelly sandy loam.

ATTACHMENT B5

ATTACHMENT C



ATTACHMENT C1



ATTACHMENT C2

ATTACHMENT D

January 14, 1994

Margaret M. Garrity
Chairwoman, Byram Township Environmental Comm.
201-347-2358 (home)

Dave Dibblee
Office of Site Assessment
300 Horizon Center
CN 407
Trenton, N.J. 08625

Dear Dave Dibblee:

Here are general block + lot maps of the areas of Byram Township that lie within a one-mile radius of the Cat Swamp Hill dumpsite.

Specific well information (depth + screening) is filed here by block + lot or by the several small water companies that service certain residential areas.

If you indicate how many wells + where you need specific information, I could then return to you a list of block, lot, owner, address, depth of well, depth of casing (anything else?).

To my knowledge, there are four small water companies within the one-mile radius; the rest are private residential or commercial wells.

Also as far as I know most wells are less than 180-200' in depth; probably the majority are more in the 100-120' range. Our geology is mostly pre-Cambrian crystalline bedrock, although a few wells are drilled in a stratified-drift glacial deposit at the east end of Cranberry Lake which lies roughly along Route 206 + extends probably almost to the dumpsite.

Just to the north + southeast of the dumpsite

ATTACHMENT D1

are wetlands, which I've marked on the map.

I have a call into the Sussex County Health Department, who serve as Byram's sanitarians asking for any information they might have on wells + well depths here. I've also asked if they have a map showing all well locations.

Thanks for your help.

Margaret McGarity

ATTACHMENT D2

November 10, 1993

McGarrity, Chairwoman
Byram Township Environmental Commission
10 Mansfield Drive
Stanhope, N.J. 07874
201-347-2358 (home phone)

NOV 17 1993

John Zisa
Bureau of Northern Enforcement
N.J.D.E.P.E.
1259 Route 46
Parsippany, N.J. 07054

Dear Mr. Zisa:

Here is some more information about the Cat Swamp Hill dumpsite in Byram, which we hope will help persuade the N.J.D.E.P.E. to include some basic groundwater testing within its initial investigation of this site.

The maps show well companies that have experienced some contamination in the past decade or so (I sent you a previous map like this, but that one contained one error--company #1 had no episodes of contamination) and also a map showing the nearest existing wells, which perhaps could be tested to help determine whether groundwater contamination exists.

I've circled the nearest wells immediately downslope of the dumpsite and here is a list of owners:

A. Jefferson Lakes Camp and Travel Corp., (block 366 lot 3.A, 38 Jefferson Lake Road), 46 Kenwood Road, Tenafly, N.J. 07670.

B. The Stone House (76rs Restaurant), (block 70, lot 9), c/o G. Mazzei, 54 Richmond Rd., Stanhope, N.J. 07874.

C. [redacted], (block 226 lot 10), 116 Route 206, Stanhope, N.J. 07874.

D. Mountainside Restaurant, (block 226 lot 3), 198 Route 206, Andover, N.J. 07821.

E. two homes (or one home, one business): [redacted] Ex. 6, (block 366 lot 12), 1 Sutton Lane, P.O. Box 785, Andover, N.J. 07821. [redacted] Ex. 6, (block 366 lot 13), 2 Sutton's Lane, Andover, N.J. 07821.

The redacted information consists of names of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

ATTACHMENT D3

Thank you again for your help. If you need any other information from us, please call me. Let us know what kind of testing the department decides upon.

Yours truly,

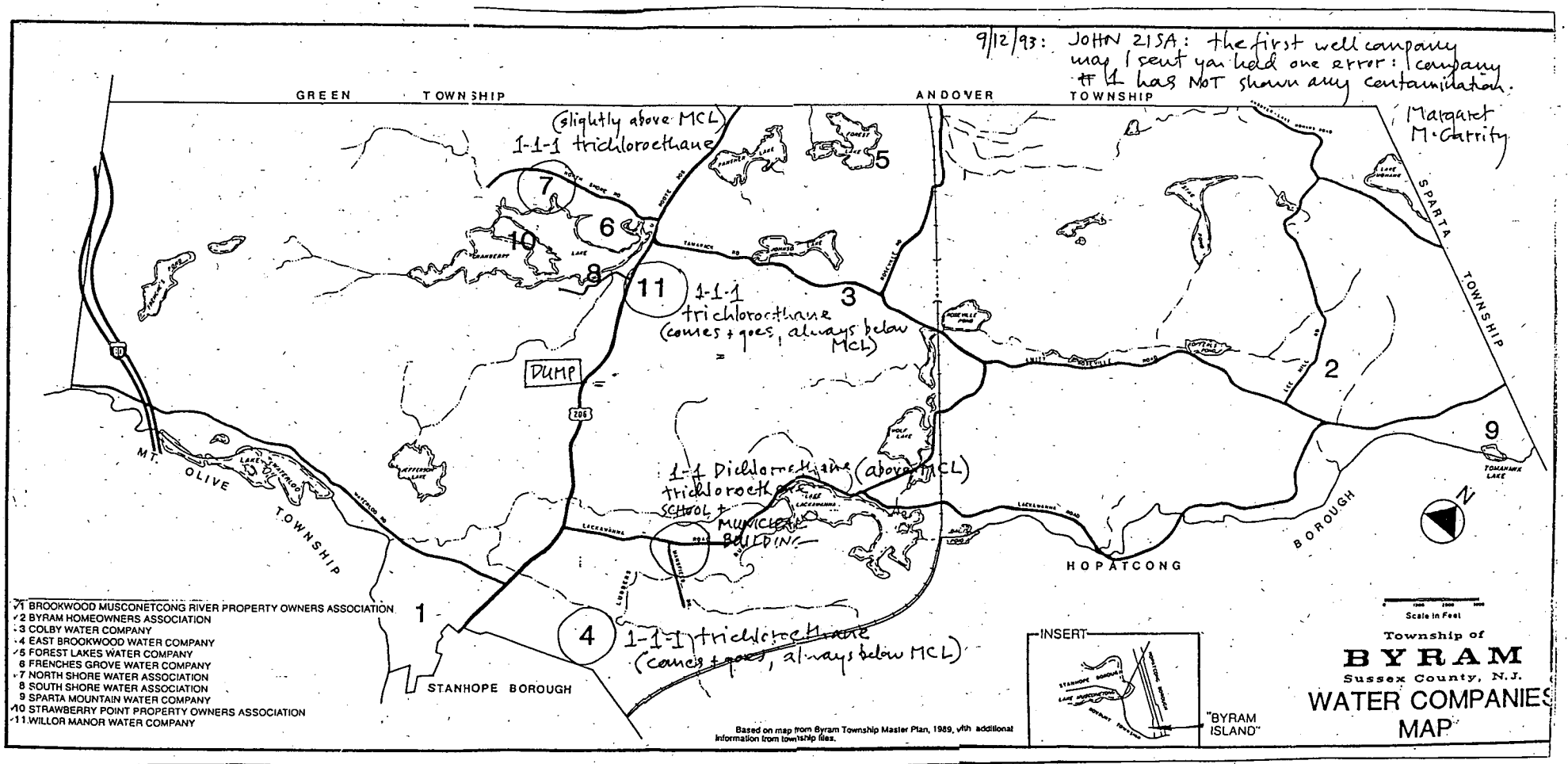
Margaret McGarrity

Margaret McGarrity

ATTACHMENT D4

9/12/93: JOHN 21SA: the first well company map I sent you had one error: company #11 has NOT shown any contamination.

Margaret McGarrity



ATTACHMENT D5

ATTACHMENT E

Form DWR-143
7/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

S-4

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE 8-2-89

GENERAL INFORMATION

PURVEYOR/ FACILITY: BROOKWOOD - MUSCONETCONG RIVER PROPERTY OWNERS ASSOCIATION

FILE LOCATION: BYRAM TWP, SUSSEX COUNTY | PW-ID #: 1904001

MAILING ADDRESS: P.O. BOX 787, STANHOPE, NEW JERSEY 07874

ADMIN: STEVE DOEBLER, SECY. | REQUIRED LICENSES: T-1, W

BUSINESS: | TELEPHONE # Admin.: 201-691-1431 | Licensed Operators: T-4 WILLIAM HORTON, W-4

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): THREE (3) WELLS:

WELL #1 LOCATED ON RIVER ROAD USED AS STANDBY 0.100 MGD CAP.

WELL #2 LOCATED ON CHESTNUT STREET ALSO STANDBY 0.110 MGD CAP.

WELL #3 LOCATED ON RIVER ROAD, MAIN WELL 0.216 MGD Est Tot Eff Cap: 0.426 MGD

TREATMENT: source, type, capacities(mgd):

WALLACE & TIERNAN HYPOCHLORINATION AT ALL WELLS,

Est Tot Eff Cap: 0.426 MGD

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): GROUND TANK AT WELL #2 0.100 MG. ALSO A HYDROPNEUMATIC TANK WITH COMPRESSOR 0.006 MG.

Est Tot Cap: 0.106 MG

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): NONE

Est Tot Avail:

AUXILIARY POWER: location, type, capabilities: DIESEL GENERATOR PORTABLE CAN HOOKUP TO ALL WELLS. 50 KW.

ATTACHMENT E1

NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd,month,year) Max SEPT 88 0.156 MGD Min MAY 88 0.081 MGD Annual Average 0.118 MGD

BULK PURCHASES (provider,mgd) NONE

BULK SALES (customer, mgd) NONE

NUMBER OF SERVICES 400 % METERED —

MUNICIPALITIES SERVED (est. services in each) BYRAM TWP.

TOTAL ESTIMATED POPULATION SERVICED 1056

CURRENT/RECENT WATER RESTRICTIONS NONE

NEW CONSTRUCTION (Project Numbers) NONE

DISTRIBUTION MAINS: Sizing 4" (min) to 12" (max)
Pressures 50 PSI (min) to 90 PSI (max)
Hydrants/Flushing Program 10 - ONCE PER YR

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
A-280	1 X YR 3/12/87 REQ'D	4/88 - 6/89
Coliform	2 PER MONTH	OK THRU 7/89
Inorganics	3 yrs	DONE 4/88
Nitrate	"	" "
Trihalomethanes		
Organics		
Turbidity		
RADIOLOGICAL	4 yrs	87
SECONDARY	3 yrs	DONE 4/88
Cl2	DAILY	DAILY

NAME OF LABORATORY GARDEN STATE LABS CERTIFICATION # 07044

ADDRESS IRVINGTON, N.J. 07111

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES NONE

TREATMENT DEFICIENCIES NONE

ATTACHMENT E2

Form DWR-143
7/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE 11-8-90

GENERAL INFORMATION

PURVEYOR/ FACILITY: COLBY WATER COMPANY

FILE LOCATION: BYRAM TWP, SUSSEX COUNTY | PW-ID #: 1904007

MAILING ADDRESS: P.O. BOX 814, ANDOVER, NEW JERSEY 07821

ADMIN.: JOHN SEABERG | REQUIRED LICENSES T: N/A W

BUSINESS TELEPHONE # Admin.: (201) 691-8174 Licensed Operators: T W N/A

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): ONE (1) WELL AT 70 TAMARACK RD. WELL HEAD PROJECTS THROUGH POOL DECK; WELL PIT ON SIDE OF BACKYARD.

Est Tot Eff Cap: EST 0.003 MG

TREATMENT: source, type, capacities(mgd): NONE

Est Tot Eff Cap:

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): THREE (3) CON-AIRE (125 gal) HYDROPNEUMATIC TANKS IN WELL PIT.

Est Tot Cap: 0.000375 MG

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): NONE

RECEIVED
DEC 19 1990
N.J. STATE DEPT. OF ENVIRONMENTAL PROTECTION
BUREAU OF STATE DRINKING WATER

Est Tot Avail:

AUXILIARY POWER: location, type, capabilities: NONE

ATTACHMENT E3

DELIVERY INFORMATION 1904007

PLANT DELIVERED WATER (mgd,month,year) Max JULY 88 0.003 MGD Min FEB 88 0.003 MG Annual Average 0.003 MGD

BULK PURCHASES (provider,mgd) NONE

BULK SALES (customer, mgd) NONE

NUMBER OF SERVICES 19 % METERED 100%

MUNICIPALITIES SERVED (est. services in each) PRIVATE RESIDENCES ON AND AROUND COLBY DRIVE

TOTAL ESTIMATED POPULATION SERVICED 85

CURRENT/RECENT WATER RESTRICTIONS NONE

NEW CONSTRUCTION (Project Numbers) NONE

DISTRIBUTION MAINS: Sizing 8" (min) to 4" (max)
Pressures — (min) to 70PSI (max)
Hydrants/Flushing Program NONE

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
Coliform	2-MONTH	OK THRU 88
Inorganics	1/3 YEARS	DONE 88
Nitrate	"	"
Trihalomethanes		
Organics		
Turbidity		
RADIOLOGICAL	1/4 YEARS	DUE 90 DONE 86
A-280	2 TIMES ~~PER~~ YR	DONE 86, 86, 87, 88 TWICE PER YEAR
SECONDARY REQS	1/3 YEARS	DONE 86 DUE 89
CORROSIVITY	ONCE	DONE 86

NAME OF LABORATORY I.C.M. LABS - RANDOLPH, N.J. ALL EXCEPT COLIFORM CERTIFICATION # 14116

ADDRESS BURHAM LABS RD#2 - SLEEPY HOLLOW RD, SUSSEX, NJ #19103 COLIFORM

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES NONE

TREATMENT DEFICIENCIES NONE

ATTACHMENT E4

rm DWR-143
7/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE 8-2-89

GENERAL INFORMATION

PURVEYOR/ FACILITY: FOREST LAKES WATER COMPANY

FILE LOCATION: BYRAM TOWNSHIP, SUSSEX COUNTY | PW-ID #: 1904003

MAILING ADDRESS: P.O. BOX 264, ANDOVER, N.J. 07821

ADMIN.: KENNETH HANSEN - SECY. TREASURER | REQUIRED LICENSES: T-1, W-1

BUSINESS TELEPHONE # Admin.: 201-786-5692 Licensed Operators: T-4 WILLIAM HORTON 201 264-1133 W-4

ROBERT MOONEY - ASST. OPERATOR 201-786-5692

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): TWO WELLS: BOTH LOCATED OFF FOREST LAKES DRIVE. WELL NO. I 0.166MGD WELL NO II 0.460MGD WELL NO II USED ONLY WHEN NEEDED. BOOSTER STATION ON FOREST LAKES DR. TWO PUMPS #1-12½HP #2-15HP Est Tot Eff Cap: 0.625MGD

TREATMENT: source, type, capacities(mgd): WALLACE + TIERNAN HYPOCHLORINATION AT BOTH WELLS.

Est Tot Eff Cap: 0.625MGD

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): ONE (1) STANDPIPE OFF CROWS NEST RD. 0.166MG. 1 HYDROPNEUMATIC TANK AT WELL #1 0.006MG 1 UNDERGROUND HOLDING TANK AT WELL NO. 2 0.005MG.

Est Tot Cap: 0.105MG.

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): NONE

Est Tot Avail:

AUXILIARY POWER: location, type, capabilities: NONE

ATTACHMENT E5

NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd,month,year) Max JUNE 1989 0.136 MGD Min FEB 1989 - 0.094 MGD Annual Average 0.115 MGD

BULK PURCHASES (provider,mgd) NONE

BULK SALES (customer, mgd) NONE

NUMBER OF SERVICES 380 % METERED 6140

MUNICIPALITIES SERVED (est. services in each) 350 SERVICES IN BYRAM TWP.

30 SERVICES IN ANDOVER TWP.

TOTAL ESTIMATED POPULATION SERVICED 6140

CURRENT/RECENT WATER RESTRICTIONS LAWNS + CARS JULY - AUGUST

NEW CONSTRUCTION (Project Numbers) NONE

DISTRIBUTION MAINS: Sizing 4" (min) to 6" (max)
Pressures 35 PSI (min) to 110 PSI (max)
Hydrants/Flushing Program 37 / 2X YR

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
CHLORINE RESIDUAL	DAILY	DAILY
Coliform	2 PER MONTH	OK THRU 7/89
Inorganics	3yrs	DONE 4/88
Nitrate	3yrs	" "
Trihalomethanes		
Organics		
Turbidity		
A-280	2X YR	4/88 / 5/88 5/89
SECONDARY REGS	3 yrs	DONE 4/88
RADIOLOGICAL	4yrs	DONE 87

NAME OF LABORATORY DURHAM LABS / GARDEN STATE LABS CERTIFICATION # 19103 / 07044

ADDRESS RD 2, BOX 20, SLEEPY HOLLOW RD, SUSSEX, N.J. 07461 - COLIFORM
GARDEN STATE ALL EXCEPT COLIFORM STUYVESANT AVE, IRVINGTON NJ. 07111

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES NONE

TREATMENT DEFICIENCIES NONE

ATTACHMENT E6

Form DWR-143
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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

3-4

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE 8-22-89

GENERAL INFORMATION

PURVEYOR/
FACILITY NORTH SHORE WATER ASSOCIATION

FILE LOCATION BYRAM TOWNSHIP, SUSSEX COUNTY | PW-ID # 1904004

MAILING ADDRESS 1 HITOGA TRAIL, ANDOVER, NEW JERSEY 07821

ADMIN. TIM LOWERY | REQUIRED LICENSES T-1 W

BUSINESS TELEPHONE # Admin.: 201 691-5623 Licensed Operators: T-2 ER. HOPE. W 201 657-5244

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): ONE WELL ON CATANA TRAIL, 0.025MGD SECOND WELL USED APRIL THRU OCTOBER ONLY. FOUR(4) SERVICES

Est Tot Eff Cap: 0.025MGD

TREATMENT: source, type, capacities(mgd): CHEM-TECH HYPOCHLORINATION 20gpd CAP

Est Tot Eff Cap: 0.025MGD

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): HYDROPNEUMATIC TANK LOCATED IN WELL HOUSE.

Est Tot Cap: 0.00052MGD

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): NONE

Est Tot Avail:

AUXILIARY POWER: location, type, capabilities: PORTABLE PROPANE GENERATOR AVAILABLE 20M ASSOCIATION MEMBER

ATTACHMENT E7

NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd,month,year) Max MARCH 0.0087 MGD Min JULY 89 0.0036 MGD Annual Average 0.0061 MGD

BULK PURCHASES (provider,mgd) NONE

BULK SALES (customer, mgd) NONE

NUMBER OF SERVICES 22 YR ROUND, 40 SUMMER | % METERED 100%

MUNICIPALITIES SERVED (est. services in each) NORTH SHORE SECTION OF CRANBERRY LAKE

TOTAL ESTIMATED POPULATION SERVICED 60-100

CURRENT/RECENT WATER RESTRICTIONS NONE

NEW CONSTRUCTION (Project Numbers) NONE

DISTRIBUTION MAINS: Sizing 1" (min) to 1½" (max)
Pressures 20PSI (min) to 60 PSI (max)
Hydrants/Flushing Program NONE

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
P-280	2X YR	6/88 - 11/88 - 5/89
Coliform	1 PER MONTH	OK THRU 7/89
Inorganics	3 YRS	DONE 3/86
Nitrate	3 YRS	DONE 3/86
Trihalomethanes		
Organics		
Turbidity		
Cl2 RESIDUAL	DAILY	DAILY
RADIOLOGICAL	4 YRS	DUE
SECONDARY EIGS	3 YRS	6/88
CORROSIVITY	ONCE	1983

NAME OF LABORATORY ENVIRONMENTAL PROFILE LABORATORIES CERTIFICATION # 15526

ADDRESS RT 37 BUSINESS PARK, SUITE 13, TOMS RIVER, N.J. 08755
201 244-6278

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES NONE

TREATMENT DEFICIENCIES NONE

ATTACHMENT E8

rm DWR-143
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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

.0-4

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE 10-4-90

GENERAL INFORMATION

PURVEYOR/
FACILITY STRAWBERRY POINT PROPERTY OWNERS ASSOCIATION

FILE LOCATION BYRAM TWP, SUSSEX COUNTY | PW-ID # 1904006

MAILING ADDRESS 200 NORTH SHORE ROAD, ANDOVER, NEW JERSEY 07821

ADMIN. GAIL BIERMAN | REQUIRED LICENSES: T-1, W-1

BUSINESS
TELEPHONE # Admin.: (201) 347-7237 Licensed Operators: T-3 WILLIAM GRABER W-3

FACILITY DESCRIPTION

JRC

SOURCES: descriptions, locations, capacities(mgd): ONE WELL AT STRAWBERRY POINT DRIVE AND NORTH SHORE DRIVE. NEW SECOND WELL IS DRILLED BUT JUST YET ON LINE.

Est Tot Eff Cap: #1 0.042MGD

TREATMENT: source, type, capacities(mgd): CHEM-TECH. INTERNATIONAL HYPOCHLORINATOR 5 GALLON CONTAINER

1 Est Tot Eff Cap: 0.042 MGD

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): ONE HYDROPNEUMATIC TANK AT WELL HOUSE.

Est Tot Cap: 0.001 MG

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): NONE

Est Tot Avail:

AUXILIARY POWER: location, type, capabilities: GAS GENERATOR AVAILABLE FROM LOCAL FIRE DEPARTMENT.

ATTACHMENT E9

NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd,month,year) Max JAN 0.010MGD Min MAY 0.0022MGD Annual Average 0.052MGD

BULK PURCHASES (provider,mgd) NONE

BULK SALES (customer, mgd) NONE

NUMBER OF SERVICES 30 YEAR ROUND / 5 SUMMER % METERED 100%

MUNICIPALITIES SERVED (est. services in each) STRAWBERRY POINT SECTION OF CRANBERRY LAKE

TOTAL ESTIMATED POPULATION SERVICED 90-110

CURRENT/RECENT WATER RESTRICTIONS NONE

NEW CONSTRUCTION (Project Numbers) NONE

DISTRIBUTION MAINS: Sizing 2" (min) to 4" (max)
Pressures 20PSI (min) to 40 PSI (max)
Hydrants/Flushing Program NONE

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
Coliform	MONTHLY	OKTHRU 9/90
Inorganics	3YRS	7/87,88 Due 7/91
Nitrate	"	7/87,88 7/91
Trihalomethanes	—	
Organics	—	
Turbidity	—	
SECONDARY	3YRS	87 DUE 90
A-280	2YRS	6/88, 9/88, 7/89 1988 Due 90
RADIOLOGICAL	4YRS	87 DUE 90

NAME OF LABORATORY I.C.M. CERTIFICATION # 14116

ADDRESS 1152 ROUTE 10, RANDOLPH, NJ. 07869

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES NONE

N/O.

TREATMENT DEFICIENCIES NONE

ATTACHMENT E10

Form DWR-143
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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

NW

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE June 17, 1988

GENERAL INFORMATION

PURVEYOR/
FACILITY Willor Manor Water Company

FILE LOCATION Byram Twp. Sussex County | PW-ID # 1904008

MAILING ADDRESS RD#2 6 Birch Rd., Andover, N.J. 07821

ADMIN. Jane Vanderbilt | REQUIRED LICENSES T / W N/A

BUSINESS
TELEPHONE # Admin.: (201) 347-2804 Licensed Operators: T W

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): 1 well: Rt 206 + Willor Dr. 20gpm

Est Tot Eff Cap: 0.028 mgd

TREATMENT: source, type, capacities(mgd): None

Est Tot Eff Cap:

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): 1 – 5,000 gal. hydropneumatic tank near well.

Est Tot Cap: 0.005 mgd

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): None

Est Tot Avail:

AUXILIARY POWER: location, type, capabilities: None

ATTACHMENT E11

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd,month,year) Max unknown Min unknown Annual Average estimated 0.005

BULK PURCHASES (provider,mgd) None

BULK SALES (customer, mgd) None

NUMBER OF SERVICES 16 % METERED 0

MUNICIPALITIES SERVED (est. services in each) Willor Manor Development

TOTAL ESTIMATED POPULATION SERVICED 55

CURRENT/RECENT WATER RESTRICTIONS None

NEW CONSTRUCTION (Project Numbers) None

DISTRIBUTION MAINS: Sizing 1½" (min) to 6" (max)
Pressures 40 psi (min) to 60 psi (max)
Hydrants/Flushing Program NONE

MONITORING & REPORTING

PARAMETER(S)	*FREQUENCY REQUIRED*	*FREQUENCY PERFORMED*
Coliform	2/Month	
Inorganics	1/3 years	Oct 1984, due 87
Nitrate	1/3 years	Oct 1984, due 87
Trihalomethanes		
Organics		
Turbidity		
Radiological	1/4 years	1983, due 87
A-280	2 per year	Done Feb 1985, July 85,
Secondary Regs	1/3 years	
Corrosivity	once	

NAME OF LABORATORY Durham Labs / I.C.M. -(A-280) CERTIFICATION # 19103/14116

ADDRESS RD2 Sleepy Hollow Rd, Sussex, N.J. 07461 / Rt 10 Randolph, N.J. 07869

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES No water level indicator, no flow meter, no casing vent

TREATMENT DEFICIENCIES None

ATTACHMENT E12

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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE 10-4-89

GENERAL INFORMATION

PURVEYOR/ FACILITY: BOROUGH OF STANHOPE WATER DEPARTMENT

FILE LOCATION: STANHOPE BOROUGH, SUSSEX COUNTY | PW-ID # 1919001

MAILING ADDRESS: 77 MAIN STREET, STANHOPE, NEW JERSEY 07874

ADMIN. JOHN ARNTZ | REQUIRED LICENSES T-2 JIM FLOYD W-1

BUSINESS TELEPHONE # Admin. (201) 347-0159 Licensed Operators: T-2 GARAGE 201-347-6316 W-3 JIM FLOYD GO TO GARAGE SMITH

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd):

3-4 WELL #2 - MUSCONETCONG AVE 0.115MGD

1 WELLS #3+4 - DYNAPAC PROPERTY #3 0.238MGD #4 0.158MGD

1 WELL #5 - PLANE LANE 0.504 MGD Est Tot Eff Cap: 1.015MGD

TREATMENT: source, type, capacities(mgd):

WELLS # 3+4 REGAL CYLINDER MOUNT 1.5 lbs CAP

WELLS # 2+5 FISITER PORTER 3 lbs CAP.

Est Tot Eff Cap: 1.015MGD

FINISHED WATER STORAGE: descriptions, locations, capacities(mg):

TWO (2) CONCRETE GROUND TANKS 0.250MG EACH

1 ELEVATED TANK 0.050MG

Est Tot Cap: 0.550MG

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd):

1 8" MAIN WITH NETCONG BOROUGH WATER DEPT. (METERED)

Est Tot Avail: ~

AUXILIARY POWER: location, type, capabilities: 75 KW DIESEL GENERATOR AT WELL #5 CAN PUMP 300 GAL/MIN.

ATTACHMENT E13

NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd,month,year) Max DEC 88 0.456 MGD Min NOV 88 0.379 MGD Annual Average 0.407 MGD

BULK PURCHASES (provider,mgd) NONE

BULK SALES (customer, mgd) NONE

NUMBER OF SERVICES 1045 | % METERED 100%

MUNICIPALITIES SERVED (est. services in each) STANHOPE BOROUGH

TOTAL ESTIMATED POPULATION SERVICED 3700 5000

CURRENT/RECENT WATER RESTRICTIONS NONE

NEW CONSTRUCTION (Project Numbers) NONE (REGULAR MAIN REPLACEMENTS)

DISTRIBUTION MAINS: Sizing 4" (min) to 8" (max)
Pressures 40 psi (min) to 120 psi (max)
Hydrants/Flushing Program 60/2XYR

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
A-220	2 YR	12/88 - 6/89 - 8/89
Coliform	5 PER MONTH	OK THRU 9/89
Inorganics	3 YRS	4/88
Nitrate	"	"
Trihalomethanes		
Organics		
Turbidity		
RADIOLOGICAL	4 YRS	DUE 88
SECONDARY REQS	3 YRS	4/88
SODIUM	3 YRS	9/87 DUE 90
CORROSIVITY	ONCE	DONE

NAME OF LABORATORY INDUSTRIAL CORROSION MGMT CERTIFICATION # 14047

ADDRESS RANDOLPH, N.J. 07869

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES NONE

TREATMENT DEFICIENCIES ALL CHLORINATION ROOMS LACK PANIC BAR HARDWARE ON THE INSIDE OF THE DOORS. N.J.A.C. 7:10-11.13(F)1

ATTACHMENT E14

Form DWR-143
7/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

2-3

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE 9-26-89

GENERAL INFORMATION

PURVEYOR/FACILITY: HOPATCONG BOROUGH WATER DEPARTMENT

FILE LOCATION: HOPATCONG BOROUGH, SUSSEX COUNTY | PW-ID #: 1912001

MAILING ADDRESS: RIVER STYX ROAD, HOPATCONG BOROUGH, 07843

ADMIN.: JOHN ESKILSON | REQUIRED LICENSES: T-1, W-2

BUSINESS TELEPHONE # Admin.: (201) 770-1200 EXT 13 | Licensed Operators: T-2 WENDALL INHOFFER ENG. 340-4300; W-2 RICHARD MEYER LIC. OP. (W) 770-1150 (H) 770-0277

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): 8 WELLS @ #1 MADISON TRAIL 2-3 0.122MGD. #2 HUDSON AVE 0.057MGD. #3 CRESCENT RD 2-3 0.106MGD. RIVER STYX WELL 2-3 0.122MG SQUARE FIELD WELL 0.106MGD. #5 HUDSON AVE 0.057MGD. #8 DARTAN AVE 0.064MGD. MARINER WELL 0.072MGD.

Est Tot Eff Cap: 0.698MGD

TREATMENT: source, type, capacities(mgd):

HYPOCHLORINATION AT EACH WELL (WALLACE & TIERNAN), 5GPD.

Est Tot Eff Cap: 0.698MGD

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): STANDPIPE BEHIND COMMUNITY CENTER RT.607 0.500MG. MUSCONETCONG AVE STANDPIPE 0.168MG. MUSCONETCONG AVE HYDROPNEUMATIC TANK 0.002MG. SIX(6) STANDPIPES ON BROOKLYN MOUNTAIN RD 0.152MG TOTAL.

Est Tot Cap: 0.820MG

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): NONE

Est Tot Avail:

AUXILIARY POWER: location, type, capabilities: ONAN PORTABLE GAS GENERATOR AVAILABLE, 90AMP-30KW, STORED IN WATER DEPARTMENT GARAGE. GENERATOR, ELECTRICAL HOOKUP PROVIDED AT EACH WELL HOUSE.

ATTACHMENT E15

NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd,month,year) Max MAY 89 0.466 MGD Min DEC 88 0.360 MGD Annual Average 0.413 MGD

BULK PURCHASES (provider,mgd) NONE

BULK SALES (customer, mgd) NONE

NUMBER OF SERVICES 1580 % METERED 100%

MUNICIPALITIES SERVED (est. services in each) HOPATCONG BOROUGH

TOTAL ESTIMATED POPULATION SERVICED 5,240

CURRENT/RECENT WATER RESTRICTIONS NONE

NEW CONSTRUCTION (Project Numbers) NONE

DISTRIBUTION MAINS: Sizing 1½" (min) to 12" (max)
Pressures 40 psi (min) to 140 psi (max)
Hydrants/Flushing Program 147 / 1x yr

MONITORING & REPORTING

PARAMETER(S)	*FREQUENCY REQUIRED*	*FREQUENCY PERFORMED*
Coliform	7 PER MONTH	OK THRU 8/89
Inorganics	3 yrs	DUE 5/90
Nitrate	3 yrs	
Trihalomethanes		
Organics		
Turbidity		
RADIOLOGICAL	4 yrs	DUE 91
SECONDARY REGS	3 yrs	DUE 5/90
A-280	2x yr	DONE 5/88 - 12/88 - 6/89
CHLORINE RES.	DAILY	DAILY

NAME OF LABORATORY PASSAIC VALLEY WATER COMMISSION CERTIFICATION # 16047

ADDRESS P.O. BOX 198, LITTLE FALLS, N.J. 07424

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES NONE

TREATMENT DEFICIENCIES NONE

ATTACHMENT E16

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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE July 23, 1990

GENERAL INFORMATION

PURVEYOR/ FACILITY: Roxbury Township Water Department

FILE LOCATION: Roxbury Township, Morris County | PW-ID #: 1436003

MAILING ADDRESS: 72 Eyland Ave, Succasunna, N.J. 07876

ADMIN.: J. Zeuvelekis | REQUIRED LICENSES: T-1, W-2

BUSINESS TELEPHONE # Admin.: 201-398-2818 Licensed Operators: T-2 D. Sutton W-3 D. Sutton

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): Well #1 (0.576 mgd) - temporarily out of service. Well #2 (0.360 mgd) - located on Ford Road. Well #4 (0.432 mgd) - located on Center Street. Well #12 (0.432 mgd) - located on Center Street. All wells are interconnected.

Est Tot Eff Cap: 1.224 mgd

TREATMENT: source, type, capacities(mgd): Well #2 is temporarily on WBT hypochlorinator (24 GPD - Cap.) - well will soon be returned to gas chlorination (Fisher & Porter - 10 lb/d - cap.). Well #4 has gas chlorination (Fisher & Porter - 10 lb/d cap.). Well #1 has WBT hypochlorinator - (24 GPD - Cap). Well #12 has WBT hypochlorinator (25 GPD - Cap.).

Est Tot Eff Cap: 1.224 mgd

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): There are two standpipes on Benzel (0.1 and 0.215 mg). A ground tank on 2nd Str. (1.0 mg). High and low level alarms to police station and office. There is a booster station for Well #2 on Ford Road.

Est Tot Cap: 1.315 mg

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): None

Est Tot Avail:

AUXILIARY POWER: location, type, capabilities: Well #2 has an Onan Diesel Generator. Well #4 has an Wankesha Diesel Generator. Well #12 has an Onan Diesel Generator that is presently being installed.

ATTACHMENT E17

NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd,month,year) Max 0.4117 mgd June 1990 Min 0.327 mgd Feb. 1990 Annual Average 0.3767 mgd July 1989 - June 1990

BULK PURCHASES (provider,mgd) None

BULK SALES (customer, mgd) None

NUMBER OF SERVICES 1597 % METERED 100

MUNICIPALITIES SERVED (est. services in each) Roxbury Twp (1321) ; Mt. Arlington (276

TOTAL ESTIMATED POPULATION SERVICED 6316

CURRENT/RECENT WATER RESTRICTIONS None

NEW CONSTRUCTION (Project Numbers) None

DISTRIBUTION MAINS: Sizing 3" (min) to 16" (max)
Pressures 20psi (min) to 150psi (max)
Hydrants/Flushing Program 63 hydrants / 2 times/year.

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
Coliform	7 / month	10 / month
Inorganics	1 / 3 years	Done 10/89; Due 10/92
Nitrate	"	" ; "
Trihalomethanes		
Organics		
Turbidity		
Radionuclides	1 / 4 years	Done 6/88; Due 6/92
Secondary	1 / 3 years	Done 10/89; Due 10/92
A-280	2 per year	Done 12/89; 5/90; Due 12/90

NAME OF LABORATORY Garden State Lab Inc / R.H. Cummings CERTIFICATION # 07044/14004

ADDRESS 399 Stuyvesant Ave, Irvington, NJ. / 29 Woodland Dr., Boonton, N.J.

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES None

TREATMENT DEFICIENCIES None

ATTACHMENT EB

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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

COUNTY BOB
10/27/92

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE 9-17-92

GENERAL INFORMATION

PURVEYOR/ FACILITY: MOUNT OLIVE TOWNSHIP WATER DEPARTMENT - VILLAGE GREEN

FILE LOCATION: MOUNT OLIVE TWP WATER & SEWER DEPT AT PLANT RT 206 N. & MUNIC HALL

PW-ID #: 1427007

MAILING ADDRESS: P.O. BOX A, ROUTE 46, BUDD LAKE NJ 07827

ADMIN.: LOU COREA JR

REQUIRED LICENSES: T-1, W-2

BUSINESS TELEPHONE # Admin.: 201 691-0900

Licensed Operators: T-4 JOHN RAKOWSKI 584-7086, W-4

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): FOUR WELLS

#1 LOCATED AT MALL 0.073 MGD #2 LOCATED BEHIND MALL 0.060 MGD

#3 (ARTESIAN) BEHIND MALL 0.055 MGD #4 LOCATED IN COMPLEX 0.194 MGD

Est Tot Eff Cap: 0.382 MGD

TREATMENT: source, type, capacities(mgd): GAS CHLORINATION AT ALL FOUR WELLS

WALLACE & TIERNAN w/ CAPITAL CONTROLS

Est Tot Eff Cap: 0.382 MGD

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): ONE TANK LOCATED AT GULF EDGE CIRCLE

Est Tot Cap: 1.0 MG

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): NONE

Est Tot Avail: —

AUXILIARY POWER: location, type, capabilities: PORTABLE GENERATOR. FOUR WELLS ARE ALL RUN ON SEPERATE POWER GRIDS (J.C.P.L.)

ATTACHMENT E19

NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd,month,year) Max 0.642 MGD 5/92 / Min 0.1912 MGD 2/92 — Annual Average 0.2484 MG 9/91 - 8/92

BULK PURCHASES (provider,mgd) NONE

BULK SALES (customer, mgd) NONE

NUMBER OF SERVICES 1208 — % METERED 100 %

MUNICIPALITIES SERVED (est. services in each) AREA NORTH OF BUDD LAKE, VILLAGE WAY & FAIRWAY DRIVE AREA, VILLAGE GREEN APARTMENTS & MALL

TOTAL ESTIMATED POPULATION SERVICED

CURRENT/RECENT WATER RESTRICTIONS NONE

NEW CONSTRUCTION (Project Numbers) W-07-92-4655 POLYPHOSPHATE FEED TO SEQUESTER IRON, MANGANES. & HARDNESS AT WELLS 1-4

DISTRIBUTION MAINS: Sizing 6" (min) to 10" (max)
Pressures 40 psi (min) to 70 psi (max)
Hydrants/Flushing Program 21 / TWICE PER YEAR

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
Coliform	4 PER MONTH	O.K. THRU 8/92
Inorganics	EVERY 3 YEARS	6/91
Nitrate	" "	"
Trihalomethanes	—	—
Organics	—	—
Turbidity	—	—
A-280	TWICE PER YEAR	6/91, 11/91, 5/92
SECONDARY	EVERY 3 YEARS	6/91
RADIOLOGICAL	EVERY 4 YEARS	1992

NAME OF LABORATORY CPM ENVIRONMENTAL SERVICES CERTIFICATION # 18367

ADDRESS 3434 ROUTE 22 WEST, SOMERVILLE, NJ 08876

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES NONE

TREATMENT DEFICIENCIES
(1) ALL FOUR CHLORINE GAS ROOMS LACK A MINIMUM OF 2 CHLOR GAS CYLINDERS INTERCONNECTED. AS REQUIRED BY N.J.A.C. 7:10-11.13(f)3
(2) GAS ROOMS LACK GAS MASKS & AIR PACKS IN VIOLATION OF N.J.A.C. 7:10-11.13(f)8
(3) WELL 1 CHLORINE ROOM FAN NOT OPERATING IN VIOL. OF N.J.A.C. 7:10-11.13(f)1.

ATTACHMENT E20

Form DWR-143
(8)(K) 63

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

12/2/92
mv

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE 10-20-92/10-22-92

GENERAL INFORMATION

PURVEYOR/
FACILITY MOUNT OLIVE TOWNSHIP WATER DEPARTMENT - SAND SHORE SUPPLY
WATER & SEWER DEPT. RT 206 N. MT OLIVE.
FILE LOCATION AND MUNICIPAL BUILDING, BUDD LAKE | PW-ID # 1427006

MAILING ADDRESS P.O. BOX A, BUDD LAKE, NJ 07828

REQUIRED LICENSES T-1 W-1

ADMIN. LOU COREA, JR.

BUSINESS TELEPHONE # Admin.: (201) 691-0900 JOHN RAKOWSKI 584-7086 HOME=(908) 723-0690

Licensed Operators: T-4 W-4

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): FOUR WELLS. #1 0.144 MGD LOCATED NEXT TO 224 SAND SHORE RD. #2 0.072 MGD LOCATED NEXT TO #19 ALCREST DR. - THIS WELL OUT OF SERVICE. #3 (STONEHEDGE) 0.072 MGD LOCATED AT END OF CAMELOT DR. #4 0.093 - CAMELOT - OUT OF SERVICE Est Tot Eff Cap: 0.216 MGD

TREATMENT: source, type, capacities(mgd): HYPOCHLORINATION AT WELL #1 & #3. MEC-O-MATIC FEEDER PUMP AT WELL 1, AND A CHEM-TREC FEEDER AT WELL 3.

Est Tot Eff Cap: 0.216 MGD

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): ONE STANDPIPE LOCATED ON CAMELOT DR. - 0.420 MG, ONE STORAGE TANK AT WELL #3 (STONEHEDGE) - 0.002 MG

Est Tot Cap: 0.422 MG

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): NONE

Est Tot Avail: —

AUXILIARY POWER: location, type, capabilities: TOWNSHIP CAN CONNECT A 4000 WATT PORTABLE GENERATOR TO WELL #1 IF NECESSARY.

ATTACHMENT E21

NJDEP - DIVISION OF WATER RESOURCES
PUBLIC COMMUNITY WATER SUPPLY INSPECTION

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd month year) Max 0.0619 MGD 5/91 Min 0.033 MGD 1/92 Annual 1/91 - 9/92 Average 0.044 MGD

BULK PURCHASES (provider, mgd): NONE

BULK SALES (customer, mgd): NONE

NUMBER OF SERVICES: 150 | % METERED: 100 %

MUNICIPALITIES SERVED (est. services in each): ALCREST AVE, OVERHILL RD., BIRCHSIDE DR., GLENSIDE DR., LOCUST DR., KENNEDY DR. CAMELOT DR. CISA DR. & ASHCREST CT.

TOTAL ESTIMATED POPULATION SERVICED: 500

CURRENT/RECENT WATER RESTRICTIONS: NONE

NEW CONSTRUCTION (Project Numbers): NONE

DISTRIBUTION MAINS: Sizing 6" (min) to 8" (max)
Pressures 40 psi (min) to 130 psi (max)
Hydrants/Flushing Program @ 18 / 1 X YEAR

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
Coliform	ONE PER MONTH	O.K THRU 9/92
Inorganics	EVERY 3 YEARS	DONE 6/91
Nitrate	" " "	DONE 6/91
Trihalomethanes	—	—
Organics	—	—
Turbidity	—	—
A-280	TWICE A YEAR	5/92, 11/91, 5/92
SECONDARIES	ONCE EVERY 3 YEARS	6/91
RADIOLOGICAL	EVERY 4 YEARS	6/91

NAME OF LABORATORY: CFM ENVIRONMENTAL SERVICES CERTIFICATION # 34836?
ADDRESS: 140 BUSINESS QUARTERS 3434 ROUTE 22 W. SOMERVILLE, NJ 08876

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES: NONE

TREATMENT DEFICIENCIES: NONE

ATTACHMENT E22

Form DWR-143
7/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE 1-6-93

GENERAL INFORMATION

PURVEYOR/FACILITY: MOUNT OLIVE TOWNSHIP WATER DEPT. — HIGH RIDGE / BLOOMINE SUPPL

FILE LOCATION: MOUNT OLIVE WATER & SEWER RT 206 N. | PW-ID # 1427002

MAILING ADDRESS: P O BOX A, ROUTE 46 BUDD LAKE NJ 07828

ADMIN. LUCIANO CORREA - BUSINESS ADMIN. | REQUIRED LICENSES T - 2, W - 1

BUSINESS TELEPHONE # Admin.: (201) 691-0900 ACME (908) 723-0690 → JOHN RAKOWSKI 584-7086 | Licensed Operators: T - 4, W - 4

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): TWO (2) WELLS LOCATED OFF STOKES RD. WELL 1 = @ 0.6432 MGD
WELL 2 = @ 0.0489 MGD

Est Tot Eff Cap: 0.692 MGD

TREATMENT: source, type, capacities(mgd): @ HYPOCHLORINATION (CHLORINATION) @ 1 DAY C.M.P FROM 55 GAL SOLUTION TANK @ POTASSIUM PERMANGANATE F.O.R IRON & MANGANESE REMOVAL - 2 FILTERS

Est Tot Eff Cap: 0.692 MGD

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): HYDROPNEUMATIC TANKS, UNDERGROUND ADJACENT TO TREATMENT PLANT ON STOKES
TANK 1 = 20,000 GAL

Est Tot Cap: 0.02 MG

EMERGENCY INTERCONNECTIONS: descriptions, available gallonage(mgd): NONE

Est Tot Avail: —

AUXILIARY POWER: location, type, capabilities: NONE AVAILABLE FOR CONNECTION

ATTACHMENT E23

NJDEP - DIVISION OF WATER RESOURCES

PUBLIC COMMUNITY WATER SUPPLY INSPECTION

Pa

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd,month,year) Max 12/91 0.017 MGD Min 9/92 0.0112 MGD Annual Average 12/91 - 11/9 0.0131

BULK PURCHASES (provider,mgd) NONE

BULK SALES (customer, mgd) NONE

NUMBER OF SERVICES 89 — % METERED 0

MUNICIPALITIES SERVED (est. services in each) FLANDERS RD., MORLYN TER., MADISON AVE, WYNWOOD AVE, CLINTON AVE, STOKES RD., WOODBINE RD

TOTAL ESTIMATED POPULATION SERVICED 210

CURRENT/RECENT WATER RESTRICTIONS NONE

NEW CONSTRUCTION (Project Numbers) NONE

DISTRIBUTION MAINS: Sizing 8" (min) to 24" (max)
Pressures 30 psi (min) to 80 psi (max)
Hydrants/Flushing Program 015 / YEARLY

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
Coliform	ONCE PER MONTH	O.K THRU 11/92
Inorganics	EVERY 3 YEARS	DONE 6/91 DUE 6/94
Nitrate	EVERY 3 YEARS	DONE 6/91 DUE 6/94
Trihalomethanes	NA	—
Organics	NA	—
Turbidity	NA	—
A-28C	TWICE A YEAR	11/91, 5/92, 11/92
SECONDARY	EVERY 3 YEARS	DONE 6/91 DUE 6/94
RADIOLOGICAL	ONCE EVERY 4 YRS	DONE 6/1991

NAME OF LABORATORY GARDEN STATE LABS CERTIFICATION # 22047

ADDRESS 410 HILLSIDE AVE, HILLSIDE, N.J. 07205

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES WELL BLOWOFF PIPE INSIDE TREATMENT BUILDING NOT SCREENED.

TREATMENT DEFICIENCIES THIS WATER SYSTEM IS NOT POST-CHLORINA IN VIOLATION OF N.J.A.C. 7:10-11.13(a)3.

ATTACHMENT E24

Form DWR-143
81

DIVISION OF WATER RESOURCES
ENFORCEMENT & REGULATORY SERVICES

COMPLIANCE EVALUATION INSPECTION
PUBLIC COMMUNITY WATER SUPPLY

DATE August 25, 1993

GENERAL INFORMATION

SURVEYOR/
FACILITY East Brookwood Estates Property Owners Association, Incorporated

FILE LOCATION Byram Township, Sussex County | PW ID # 1904002

MAILING ADDRESS P.O. Box 575, Stanhope, New Jersey, 07874

ADMIN. Richard Stopa | REQUIRED LICENSES T-1 W-1

BUSINESS TELEPHONE # Admin.: (201) 347-9004 Licensed Operators: T-4 Robert Gradecka (201) 347-1525 W-4

FACILITY DESCRIPTION

SOURCES: descriptions, locations, capacities(mgd): Three (3) wells:
Well #1 located off of Brookwood Rd. in basketball court; 0.0864 MGD
Well #2 located off of Trout Brook Rd near Trout Brook; 0.0547 MGD
Well #3 located off of Mountain Rd.; 0.0288 MGD Est Tot Eff Cap: 0.17 MGD

TREATMENT: source, type, capacities(mgd): 12-13% solution of Sodium Hypochlorite added to Well #'s 2 + 3. Well #1 fed directly into system.

Est Tot Eff Cap: 0.0835 MGD

FINISHED WATER STORAGE: descriptions, locations, capacities(mg): one (1) Stand pipe w/ booster pump above Well #3 - Mountain Rd.; 0.07 MG. Well #'s 1 + 2 fed directly into system.

Est Tot Cap: 0.07 MG

EMERGENCY INTERCONNECTIONS: descriptions; available gallonage(mgd): NONE

Est Tot Avail: —

AUXILLARY POWER: location, type, capabilities: NONE - Gravity feed

ATTACHMENT E25

PUBLIC COMMUNITY WATER SUPPLY INSPECTION

DELIVERY INFORMATION

PLANT DELIVERED WATER (mgd,month,year) Max 7/93 0.0562 MGD Min 1/93 0.0339 MGD Annual 7/92 - 7/93 Average 0.0386 MGD

BULK PURCHASES (provider,mgd) NONE

BULK SALES (customer, mgd) NONE

NUMBER OF SERVICES 178 % METERED 0

MUNICIPALITIES SERVED (est. services in each) East Brookwood Estates section of Byram Township

TOTAL ESTIMATED POPULATION SERVICED est. 612

CURRENT/RECENT WATER RESTRICTIONS lawn watering allowed on odd/even date basis

NEW CONSTRUCTION (Project Numbers) NONE

DISTRIBUTION MAINS: Sizing 4" (min) to 6" (max)
Pressures 20 psi (min) to 60 psi (max)
Hydrants/Flushing Program 4/1 x per year

MONITORING & REPORTING

PARAMETER(S)	FREQUENCY REQUIRED	FREQUENCY PERFORMED
A-280's	2/year	11/91, 4/92, 11/92, 5/93
Coliform	1/month	OK thru 7/93
Inorganics	1/3 years	DONE 4/91, DUE 4/94
Nitrate	1/year	1/Month, OK thru 7/93
Trihalomethanes	NA	NA
Organics	4/year: every 3rd year	DUE by 1995
Turbidity	NA	NA
Secondaries	1/3 years	DONE 4/91, DUE 4/94
Radiologicals	1/4 Years	DONE 1986, DUE ???
Lead + Copper	Start 7/1/93	1st Round DUE 12/31/95

NAME OF LABORATORY ICM, Inc. / Q.C., Inc. CERTIFICATION # 14116/77166

ADDRESS 1152 Rte. 10, Randolph, NJ / P.O. Box 514, Southampton, PA

COMPLIANCE EVALUATION

SOURCE DEFICIENCIES The blowoff pipe for Well # 2 is not adequately protected against the entry of pollution (N.J.A.C. 7:10-11.4(g)2.).

TREATMENT DEFICIENCIES NONE

ATTACHMENT E26

ATTACHMENT F

State of New Jersey
Department of Environmental Protection and Energy

Robert C. Shinn, Jr.
Commissioner

TO: Cat Swamp Hill Dump Site File

FROM: David Dibblee, HSMS IV, Office of Site Assessment

RE: Private Potable Wells Within 4-Miles

The number of private potable wells in the vicinity of the site was calculated by counting the number of homes outside of areas served by smaller water companies in the area. These calculations should be considered estimated due to the fact that distinctive service boundries could not be accurately assessed for the smaller water companies. However, it should be noted that potable water in Byram Township is aquired entirely by private potable wells and a number of smaller water companies.

ATTACHMENT F1

ATTACHMENT G

State of New Jersey
Department of Environmental Protection and Energy

Robert C. Shinn, Jr.
Commissioner

TO: Cat Swamp Hill Dump Site File

FROM: David Dibblee, HSMS IV

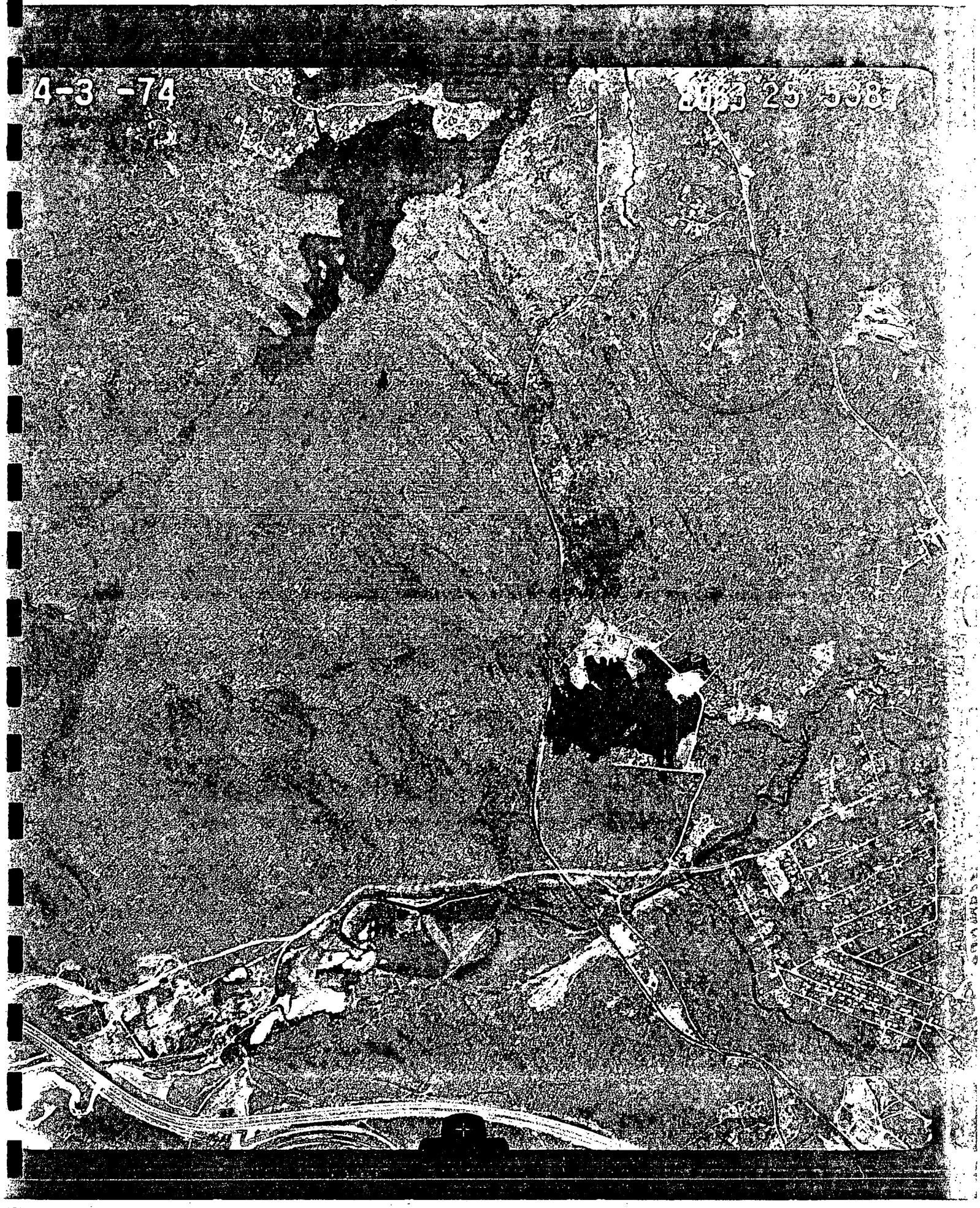
RE: 4-mile Population Calculations

The populations that reside within 4 miles of the Cat Swamp Hill Dump Site were calculated using a combination of the known number of houses counted from topographic and local maps in the vicinity of the site as well as the 1990 GEMS population database.

ATTACHMENT G1

ATTACHMENT H

ATTACHMENT H1



ATTACHMENT H2

ATTACHMENT I

State of New Jersey
Department of Environmental Protection and Energy
Division of Publicly Funded Site Remediation
CN 413
Trenton, NJ 08625-0413
Tel. # 609-984-2902
Fax. # 609-633-2360

Anthony J. Farro
Director

TO: Cat Swamp Hill Dump Site File

FROM: David Dibblee, HSMS IV, Office of Site Assessment

RE: April 8, 1994 Pre-Sampling Assessment

At approximately 1040 on April 8, 1994 David Dibblee and David Triggs of the NJDEPE, Office of Site Assessment met with Margaret McGarrity and Mark Smith of the Byram Township Environmental Commission at the Above listed site.

The inspection began at Area #1 which was a trench located on the north side of the dump site. (see site map) The dimensions of the trench appeared to be approximately 80 feet in length by 10 feet wide. Soil gas surveys conducted within the middle of the trench at several locations did not reveal readings above background. A photograph was taken of the trench facing the north.

Area #2 was then inspected which lies to the west of Area #1. Area #2 was also a trench approximately 60 X 15 feet. This area contained ponded water within the trench as well as various debris including tires, metal and other household garbage. Soil gas surveys were conducted on the ends of the trench where dry soil could be found. No readings above background were noted in this area and a photograph was taken of the trench facing south.

From Area #2 the inspectors traveled south-easterly across the site to a series of trenches on the southern boundary of the dump area. Here four distinct trenches were noted running in an east-west direction. This location was labeled as Area #3 on the site map and each trench was identified as Trench #1-4 from north to south. The trenches and surrounding area was littered with drum carcasses containing a hardened resin or putty like substance as well as rock-like slag waste, foil backed insulating material, tires, a type of metal foil and other debris. Soil gas surveys were conducted throughout the trenches and around some of the drum

carcasses. No readings above background were noted in any of these trenches. Photographs were taken of each of trenches as well as the drums and other debris which littered the area.

From this location the inspectors traveled west towards Areas#4 and #5. These areas did not have definitive boundaries as the other areas did, however; similar debris was noted here including rolls of the fiberglass-type insulating material and drums of the hardened resin-like material. In some instances the entire drum had decayed away leaving only the hardened resin material formed in the shape of the drum. Photographs were taken of the materials littering this area.

The next area inspected was along the eastern edge of the dump site where the topography quickly dips towards a swamp between the dump and Route 206. Traveling along the bottom of the hillside various bails and rolls of the unknown insulating material were noted partially buried or on the ground surface on the hillside. Soil gas surveys conducted at the base of the hill near the swamp revealed reading of up to 20 units on the photoionization detector (Hnu) and 4 units on the organic vapor analyzer (OVA). It is unknown if these readings were attributable to decaying matter or common "swamp gases". Photographs were taken of the materials in this area as well as the swamp from the higher elevations of the dump.

It was noted during the inspection that no fences exist at the site and access to the dump area is easy for the outside population. No stressed flora or fauna was noted at the site. The inspectors left the site at 1225.

ATTACHMENT J

PB 84-209493

NORTHWEST NEW JERSEY

AN INVENTORY AND HISTORY OF HISTORIC ENGINEERING AND INDUSTRY

BY

H. LEEDOM LEFFERTS, JR., DIRECTOR

AND

DAVID R. PEIFER, ASSOCIATE DIRECTOR

WARREN AND SUSSEX COUNTIES INVENTORY

DREW UNIVERSITY

MADISON, NEW JERSEY

U.S. DEPARTMENT OF THE INTERIOR

HERITAGE CONSERVATION AND RECREATION SERVICE

OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

1979

ATTACHMENT J1

STONE ARCH BRIDGE (1874)

Stanhope
18.524440.4527450/
Stanhope

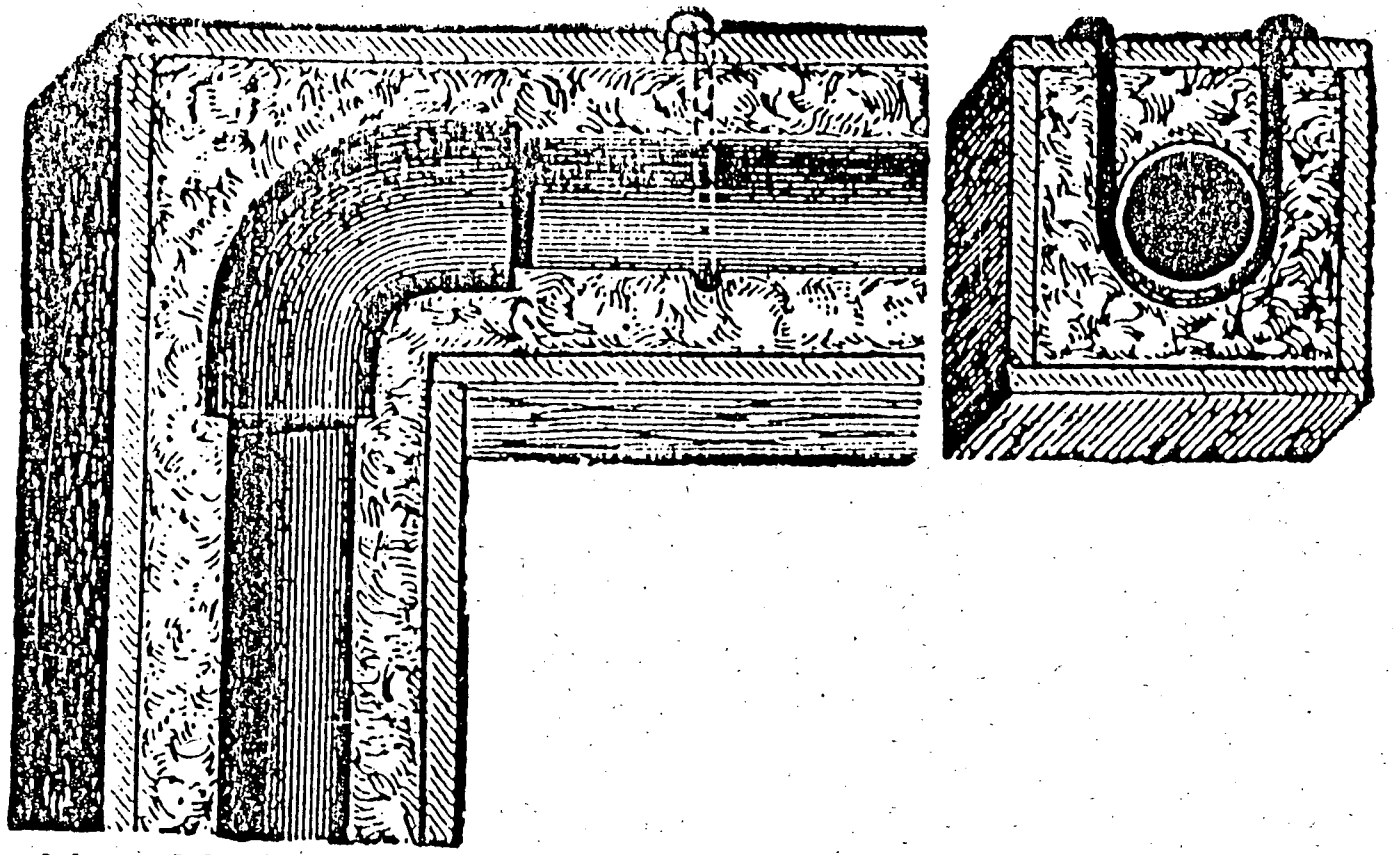
Single span keystone arch bridge. Roadway width approximately 30 feet. Keystone bears date 1874. Random coursed limestone construction, arch span about 15 feet. This bridge once carried a rail spur to the Stanhope Furnace. It now serves as an industrial road for Compac Corporation.

U.S. MINERAL WOOL COMPANY
STANHOPE PLANT (1875)

Stanhope
18.524290.4527380/
Stanhope

Today, the United States Mineral Products Corporation occupies the site of the early United States Mineral Wool Company plant at Stanhope, New Jersey. Little remains of the original plant; however, its history is documentable. Mineral wool is a specialized insulating product made by heating rock and blowing jets of compressed air or steam through it. The result is a fibrous fireproof mass which has excellent insulating properties. Such a product was produced naturally during an eruption of Mt. Kilauea in Hawaii in 1836. The first man-made slag fibers were produced in 1864 by G. Perry in Wales and used in making mortar. In 1870, Siemens and Dieterle began producing slag wool for insulation at Neusattel, Germany, and an American patent was issued to J. Player. In 1869, the first commercial scale production of mineral wool was carried out by the Parrott family, makers of Parrott guns, and Alexander D. Elbers at Stanhope, New Jersey. In 1875, the United States Mineral Wool Company was formed and operated on the slag produced by the Stanhope furnace, then operated by the Musconetcong Iron Works. In 1876, improvements were made to the process under patent #180,470: "Improvement in the Process of Disintegrating Molten Scoriaceous Substances." This involved the addition of other siliceous material to the slag and remelting it. Feldspar was obtained from Lockwood, about 3 miles away, and added to the mix. On November 17, 1885, a new cupola was added to the Stanhope plant which allowed for the production of two grades of mineral wool with different proportions of rock and slag. Grade 1 with more rock was marketed at $5 per 100 pounds, while Grade 2, with a higher slag content, sold for $1 per 100 pounds. In 1881, the New York Steam Company purchased the plant and used mineral wool to insulate its steam pipes in New York City. In addition, mineral wool was used to insulate railroad passenger cars and "reefers" as well as cold storage houses

ATTACHMENT J2



New York Steam Company used this system in the 1880's to insulate underground steam pipes. Boxes were packed with mineral wool.

Illustration of Product Application, U.S. Mineral Wool Company
(courtesy U.S. Mineral Products Corporation)

and as insulation and sound deadening in construction, especially after the 1880's. By February 23, 1886, the Stanhope plant was producing 2,500 pounds of rock wool and 6,000 pounds of slag wool per day. (U.S. Mineral Products Co., 100 Years of Producing Energy Conserving Materials, 1975; The Daily Advance, "Insulation Industry Started Here," Dover, N.J., November 18, 1975; The Stanhope Eagle 8/11/1885, 9/22/1885, 9/29/1885, 2/20/1885, 10/27/1885, 11/17/1885, 2/23/1886; National Car Builder, Ap. 1882, "Mineral Wool" p. 47, R. M. van Arsdale, pub., N.Y., N.Y., 1882; Scientific American, Architects and Builders Addition, p. 73, "Mineral Wool as a Filling," Ap. 1887; Mr. Frank Stumph, V. P., U.S. Mineral Products Co., Stanhope, N.J.)

BRIDGE-U.S. MINERAL PRODUCTS COMPANY
(ca. 1875)

Stanhope
18.524240.4527380/
Stanhope

This stone arch bridge, about 30 feet long, 10 feet wide with an arch span of 12 feet, provided rail access by the Delaware, Lackawanna, and Western, and later the Erie-Lackawanna to the U.S. Mineral Wool Plant and the Stanhope Furnace. It is in generally fair condition and today carries an industrial road inside the U.S. Mineral Products plant. (Deed map in the possession of U.S. Mineral Products Co., 41 Furnace Street, Stanhope-Survey, April 3, 1928.)

CONRAIL BRIDGE #63.07
(1870, ca. 1890)

Mansfield
18.507210.4514940/
Washington

This stone arch bridge, constructed by the Delaware, Lackawanna, and Western Railroad in 1870, spanned a dirt road. It has been widened probably ca. 1890 to carry a double track mainline and a siding. The original portion on the south side measures 11½ feet in height and 16 feet in width. The length of the old section is 45 feet. The new (1890) section is 15½ feet high, 17 feet 1/8 inch wide and 18 feet, 6 inches long. The arches are keystone type with the finer dressing being found on the older arch. The road has been abandoned, the structure now serving as a drainage tunnel.

ATTACHMENT J4

ATTACHMENT K

Dave = well is 124'
casing 106'
more information attached

COPY

The redacted information consists of names and/or phone numbers of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

June 7, 1994

Byram Township Environmental Commission
10 Mansfield Drive
Stanhope, N.J. 07874

Ex. 6 → Ex. 6
2 Sutton Lane
P.O. Box 785
Andover, N.J. 07821

Dear Ex. 6

This is to remind you that David Dibblee and David Triggs of the New Jersey Department of Environmental Protection and Energy (NJDEPE) will come to your home on June 16 to gather water samples for testing.

They will be working in the area all day and so may be at your place anytime from about 9 a.m. to 4 p.m. I've asked them to try to get there first thing in the morning and that seems likely.

Thank you again for agreeing to participate and help Byram Township find out whether the old dumpsite on Cat Swamp Hill presents a hazard. If you have any questions, please call me at 347-2358.

Yours truly,

Margaret McGarrity, Chairwoman
Byram Township Environmental Commission

ATTACHMENT K1

Dave Dibblee — This man knows of an old well that was in use when the dump was operating + is on the site itself. He'll take you there, if you like. He's lived right there all his life! Margaret McGarrity

№ W 090

BOARD OF HEALTH

TOWNSHIP OF BYRAM

PERMIT TO LOCATE AND CONSTRUCT OR ALTER

A WATER SUPPLY

Permission is hereby granted..... [redacted] Ex. 6 .....

Name of Owner or Contractor

..... 2 Sutton Lane .....

Address

[X] Locate and Construct or to [ ] Alter

A WATER SUPPLY

Location: Block No ...366...Lot No ...13.....Street....Sutton Lane

as shown on Application for Permit to Locate and Construct or Alter a Water Supply.

Water Supply Number ...22-28398.....

IN ACCORDANCE WITH Ordinances of the Board of Health of the Township of Byram.

"An Ordinance establishing a code regulating the location, construction, alteration, use and supervision of individual and semi-public water supplies, requiring certain permits, providing for the inspection of such supplies, the fixing of fees and prescribing penalties for violations."

BOARD OF HEALTH OF BYRAM TOWNSHIP

Date . December 8, 1988

Fee $125.....

Judith Hancox/mrc

For the Board of Health

PERMIT EXPIRES ONE YEAR FROM DATE

The redacted information consists of names and/or phone numbers of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

ATTACHMENT K2

INDIVIDUAL SEMI-PUBLIC OR PUBLIC WATER SUPPLY

(To be filed in Duplicate)

The redacted information consists of names and/or phone numbers of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

DATE 12-8-88

PLEASE PRINT

Location - Address 2 Sutton lane Block 366 Lot 13
NO. & STREET

Size of Lot 3.70 Acres Area Sq. Ft.

Owner (print) Ex. 6 Telephone Ex. 6

Present Address 2 Sutton lane

Name & Address of Contractor Dan Ballentine well Drilling Inc P.O. Box 178 Port Murray Rd Port Murray N.J. 07865 Telephone 689 7666

Number of Realty Improvements to be Served 1

Type of Water System to be Constructed

1. Non-public water system (individual dwelling) ✓
2. Public, non-community water system (restaurants, office buildings, businesses, etc.)

Type of Well or Source Rotary Drilled

Estimate Depth of Casing 50

Method of Sealing Cement grout

Pumping Equipment Submersible

Purification Facilities (if required)

Proposed Use of Water Supply domestic

Estimated Water Demands and Basis of Estimates 5 T

Describe Type of Alteration Proposed New well, replace well Point under House

Contractor (signed) Dan Ballentine Owner (signed) Ex. 6

OFFICE USE

Signed Judith Hancox /mnc
HEALTH OFFICER/SANITARIAN

APPLICATION FEE $25.00

DEC 8 1988

PERMIT FEE 100.00

Byram Township

DATE APPROVED Dec 8, 1988

RETURN ORIGINAL APPLICATION

FRANCIS J. SCHINDELAR
P. E. & LAND SURVEYOR, LIC. #4062
MAIN ST., STANHOPE, NEW JERSEY

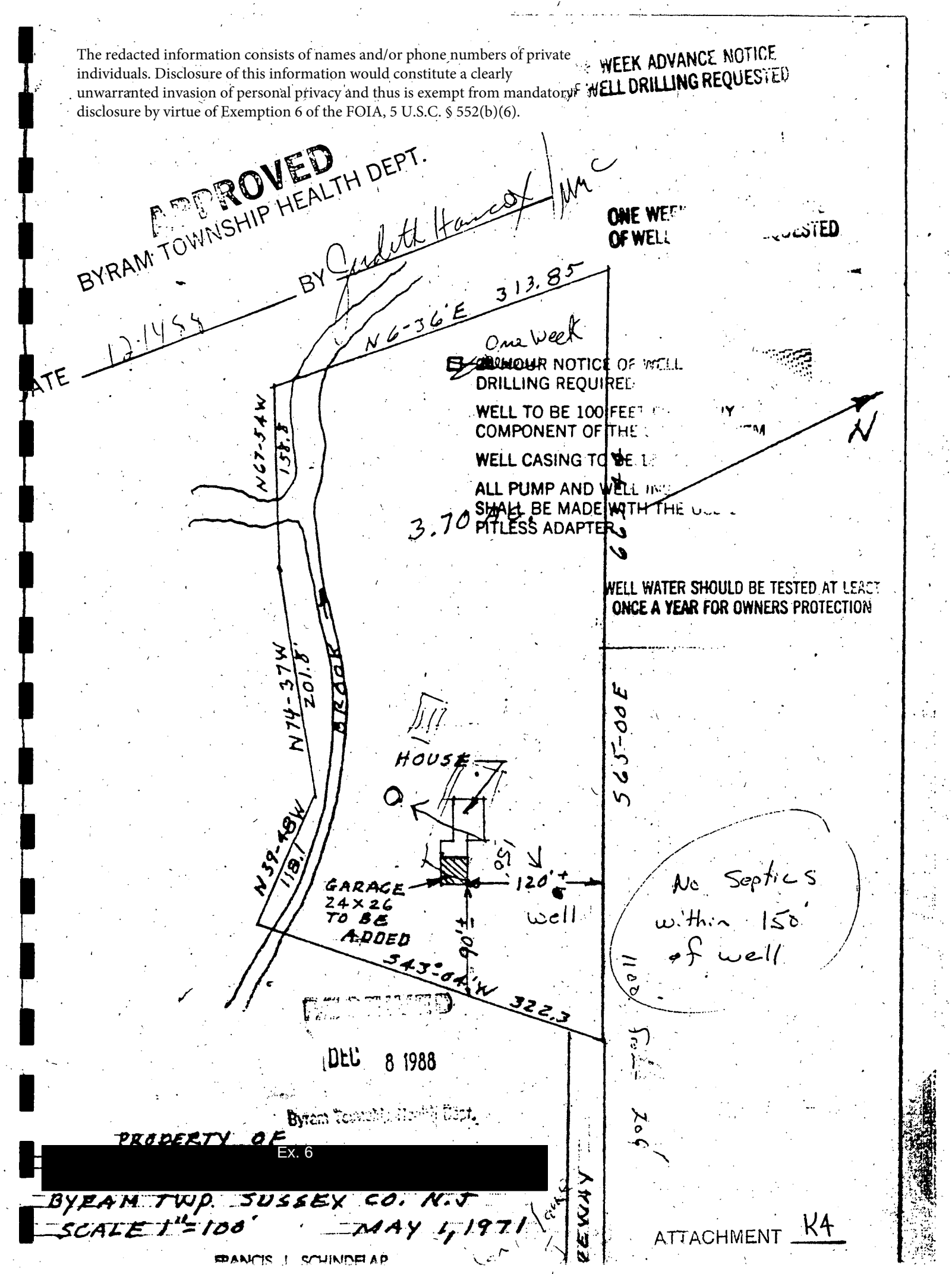
B-366
1 13

Andover

DRIL

ATTACHMENT K3

The redacted information consists of names and/or phone numbers of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).



Form DWR-138
11/85

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

RECEIVED DEC 3 0 1988

WELL RECORD

The redacted information consists of names and/or phone numbers of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

Well Permit No. 22 - 25398
Atlas Sheet Coordinates 22 : 41 : 493

OWNER IDENTIFICATION - Owner Ex. 6
Address [redacted]
City [redacted] State NJ Zip Code 07821

WELL LOCATION - If not the same owner please give address. Owner's Well No. _____
Address 2 Sutton Lane
County Sussex Municipality [redacted] Lot No. 12 Block No. 76

WELL USE Withdrawal - For Water Supply Status In Use

WATER USE Domestic Average _____ gals. daily Maximum _____ gals. daily

WELL CONSTRUCTION
BOREHOLE DIMENSIONS
Date well completed 12 / 15 / 88
Depths: Total 124 ft. Finished _____ ft.
Diameter: Top 10 in. Bottom 5 7/8 in.
Land Surface Elevation at well 800 ft. Elevation was determined using Topographic Map #22
Casing Height (stick-up) above land surface 1.25 ft.

	DEPTH TO TOP (FT.)	LENGTH (FT.)	DIAMETER (IN.)	TYPE AND MATERIAL Screens: Note Slot Size(s)
Casing 1		106'	6"	.250 Wall Steel
Casing 2				
Casing 3				
Screen 1				
Screen 2				
Tail Piece				
Gravel Pack				
Grout				
Grouting Method		Drill + Drive		

WELL FLOWS NATURALLY _____ gals. per min. at _____ ft. above the land surface.
Water rises to _____ ft. above the land surface.

RECORD OF TEST Test Date 12 / 15 / 88
Static water-level before pumping 15 ft. below land surface. Water level _____ ft. below land surface after _____ hrs. of pumping.
Water level was measured using tape Drawdown _____ ft.
Discharge rate measured using estimated Discharge Rate 15 gals. per min.
Well was pumped using air Specific Capacity _____ gals. per min. per ft. of drawdown
Observed effects on nearby wells _____
Water Quality (taste, odor, color, etc.) _____

PERMANENT PUMPING EQUIPMENT Installed by Not Installing Pump Type _____
Mfrs. Name _____ Model _____
CAPACITY: Pump delivers _____ GPM at _____ PSI pressure.
POWER: _____ HP at _____ RPM Power Source _____
DEPTHS: Pump _____ ft. Footpiece _____ ft. Airline _____ ft.
FLOW METER: Model _____ installed on _____ in. diameter pipe.

CONTRACTOR - Name of Drilling Contractor DAN BALLENTINE
Address P.O. Box 178, Pact Murray Rd.
City Pact Murray State N.J. Zip Code 07865
Name of Driller Carl T. Kirchy License No. 1252

Signature of Contractor _____ Date 12 / 23 / 88

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

ATTACHMENT K5

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

WELL RECORD

Well Permit No. 22 - 25378

22 41 478

Driller: Please use the space below for the log description. Note water bearing zones or geological formation.

Are samples available? ☐ Yes ☒ No

Drilling Method Air Rotary

Type of Rig IR

Aquifer/Geo. Fm. Clay - Sand - Gravel

LOG

0-7' Clay + Gravel
7-67' Fine Sand
67-74. Gray-clay-Silt & Sand.
74-79 Fine Clay + gravel
79-124 Weathered granite

W.S. 104 - 117'

DEP USE ONLY

Storet Hydrogeo Code _____
USGS Hydrogeo Code _____
Depth to Bedrock _____ ft.
Bedrock Lith. Code _____
Bedrock Fm. Code _____

Completed by _____
Date ____ / ____ / ____

Thick.	Lith.	Fm.

GWPI No. _____ - _____ NJPDES No. _____ - _____

Latitude ____ ° ____ ' ____ " Longitude ____ ° ____ ' ____ "

Lat-Long Accuracy ☐ 1" ☐ 5" ☐ 10" ☐ 20"

USGS Quadrangle _____

Drainage Basin Code _____ County/Municipality Code _____

OTHER FILES: ☐ Lithologic Log ☐ Samples Available ☐ Aquifer Test ☐ Water Level Data
☐ Geophysical Logs ☐ Water Chemistry ☐ Pollution Case

Checked by ✓ Date ____ / ____ / ____

RECEIVED
JAN 9 1989

ATTACHMENT K6

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

Mail to
Water Allocation
CN 029
Trenton, N.J. 08625

4

Permit No. 22 28 398

PERMIT TO DRILL WELL

VALID ONLY AFTER APPROVAL BY THE D.E.P.

RECEIVED DEC 0 9 1988

COORD #: 22.41.4 .93

Owner [redacted] Ex. 6

Address 2 Sutton Lane,
Andover, N. J. 07821

Name of Facility same

Address 2 Sutton Lane,
Byram Township, N. J.

Driller Dan Ballentine Well Drilling, Inc.

Address P. O. Box 178, Port Murray Road,
Port Murray, N. J. 07865-0178

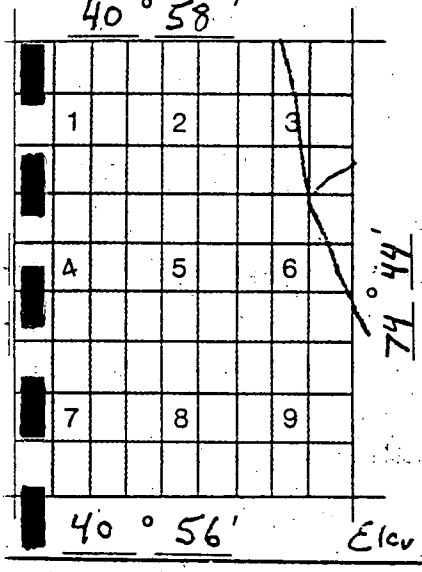
Diameter of Well	6 *Inches*	Proposed Depth of Well	200 *Feet*
Proposed Capacity of Pump	less than 20 *GPM*	Method of Drilling *(cable-tool,rotary,etc.)*	rotary
Use of Well *(See Reverse)*	Domestic - replacement poin		
Drinking Water Supply?	a. yes (see #6 on reverse)		no✓

LOCATION OF WELL

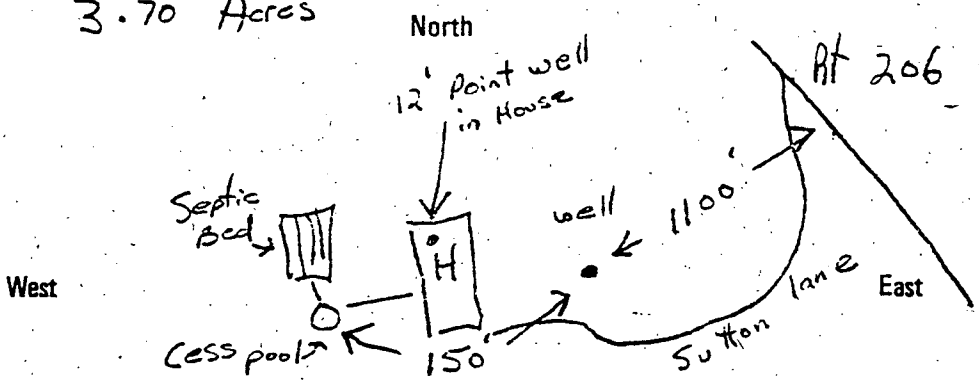
Lot #	Block#	Municipality	County
13	366	Byram Twsp.	Sussex

State Atlas Map No. 22

3.70 Acres



Draw sketch showing distance and relations of well site to nearest public roads, streets, septic systems, etc.



The redacted information consists of names and/or phone numbers of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT. APPROVAL OF THIS PERMIT IS SUBJECT TO ACCEPTANCE OF AND COMPLIANCE WITH THE FOLLOWING ADDITIONAL CONDITIONS.

- ☐ **DOMESTIC/PUBLIC NON-COMMUNITY** Water Supply Wells shall comply with N.J.A.C. 7:10-12.1 et. seq.
- ☐ **PUBLIC COMMUNITY** Water Supply Wells shall obtain construction and operation permits from the Bureau of Safe Drinking Water in accordance with N.J.A.C. 7:10-11.2 and be constructed in compliance with N.J.A.C. 7:10-11.3.
- ☐ **DOMESTIC IRRIGATION SUPPLY** - No piping from the well for which the permit applies shall enter any building.
- ☐ **HEAT PUMP WELLS** - Wells must be a minimum of 50 feet apart and the water must be returned to the same aquifer as the production well. A two hour pump test must be performed on the return well at a rate of 1½ times the estimated return flow of water.
- ☐ **INDUSTRIAL SUPPLY** - A physical connection control permit shall be obtained pursuant to the provisions of N.J.A.C. 7:10-10-1 et. seq.
- ☐ **REPLACEMENT WELL** - Existing well must be sealed by a certified New Jersey licensed well driller.
- ☐ MONITORING PURPOSES ONLY ☐ IRRIGATION PURPOSES ONLY ☐ TEST PURPOSES ONLY
- ☐ PINELANDS - Well must be drilled over 100' deep or a clay layer at least 4' in thickness must be encountered.
- ☐ GEOPHYSICAL LOGS of this well must be made. Permanent pumping equipment *SHALL NOT* be installed until such logs are made.
- ☐ SAMPLES of cuttings required every _____ feet or change in material.
- ☐ RESULTS of a volatile organic scan must be obtained prior to using the water and submitted to _____
- ☐ MINIMUM distance requirements as per N.J.A.C. 7:10-12.13 have not been met - see attached additional condition(s).

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources / Water Allocation
DEC 02 1988

DEC 15 1988

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well a

Date November 28, 1988

Signature of Driller [redacted] Ex. 6

Signature of Owner _____

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

ATTACHMENT K7

Dave — well is 150'
casing 50'
more information attached.

Copy

The redacted information consists of names and/or phone numbers of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

June 7, 1994

Byram Township Environmental Commission
10 Mansfield Drive
Stanhope, N.J. 07874

Ex. 6 → Ex. 6

116 Route 206
Stanhope, N.J. 07874

one is home +
one is the bait-fishing
store they own; you
will find them at
the store, both at
the same location.

Dear Ex. 6

This is to remind you that David Dibblee and David Triggs of the New Jersey Department of Environmental Protection and Energy (NJDEPE) will come to your store on June 16 to gather water samples for testing.

The store is called Lee + Sons.

They will be working in the area all day and so may be at your place anytime from about 9 a.m. to 4 p.m. I've asked them to try to get there in the morning and that seems likely.

Thank you again for agreeing to participate and help Byram Township find out whether the old dumpsite on Cat Swamp Hill presents a hazard. If you have any questions, please call me at 347-2358.

Yours truly,

Margaret McGarrity, Chairwoman
Byram Township Environmental Commission

ATTACHMENT K8

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

RECEIVED NOV 30 1987

WELL RECORD

Well Permit No. 22 26953
Atlas Sheet Coordinates _____ : _____ : _____

Ex. 6

OWNER IDENTIFICATION - Owner _____
Address P.O. BOX 147
City STAM [illegible] State NJ Zip Code _____

WELL LOCATION - If not the same owner please give address. Owner's Well No. _____
Address _____
County _____ Municipality BRAM TWP. Lot No. (x) Block No. (x)

WELL USE H Industrial Status _____

WATER USE Domestic Average _____ gals. daily Maximum _____ gals. daily

WELL CONSTRUCTION
BOREHOLE DIMENSIONS
Date well completed 11 / 16 / 87
Depths: Total 150 ft. Finished 150 ft.
Diameter: Top 10 in. Bottom 6 in.
Land Surface Elevation at well _____ ft. Elevation was determined using _____
Casing Height (stick-up) above land surface 12" ft.

The redacted information consists of names and/or phone numbers of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

	DEPTH TO TOP (FT.)	LENGTH (FT.)	DIAMETER (IN.)	TYPE AND MATERIAL Screens: Note Slot Size(s)
Casing 1		50	6	Steel
Casing 2				
Casing 3				
Screen 1				
Screen 2				
Tail Piece				
Gravel Pack				
Grout				
Grouting Method				

WELL FLOWS NATURALLY _____ gals. per min. at _____ ft. above the land surface.
Water rises to _____ ft. above the land surface.

N/A

RECORD OF TEST Test Date _____ / _____ / _____
Static water-level before pumping 25 ft. below land surface. Water level _____ ft. below land surface after _____ hrs. of pumping.
Water level was measured using _____ Drawdown _____ ft.
Discharge rate measured using _____ Discharge Rate 25 gals. per min.
Well was pumped using _____ Specific Capacity _____ gals. per min. per ft. of drawdown
Observed effects on nearby wells _____
Water Quality (taste, odor, color, etc.) _____

PERMANENT PUMPING EQUIPMENT Installed by _____ Pump Type _____
Mfrs. Name _____ Model _____
CAPACITY: Pump delivers _____ GPM at _____ PSI pressure.
POWER: _____ HP at _____ RPM Power Source _____
DEPTHS: Pump _____ ft. Footpiece _____ ft. Airline _____ ft.
FLOW METER: Model _____ installed on _____ in. diameter pipe.

D. F. WELL DRILLING

CONTRACTOR - Name of Drilling Contractor _____
Address [illegible]
City [illegible] State NJ Zip Code 07059
Name of Driller [illegible] License No. 1236

Signature of Contractor D F Well Drilling Co Inc Date 11 / 25 / 87

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

ATTACHMENT K9

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J. 08625

RECEIVED NOV 3 0 1987

PERMIT TO DRILL WELL

Permit No. 2226953

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD#: 22;41.5;76

Owner [redacted] Ex. 6

Address PO Box 147
Stanhope, NJ

Name of Facility Stone

Address Stone
116 Route 206

Driller D.F. Well Drilling Co Inc

Address Box 8 Route 206
Netcong, NJ 07857

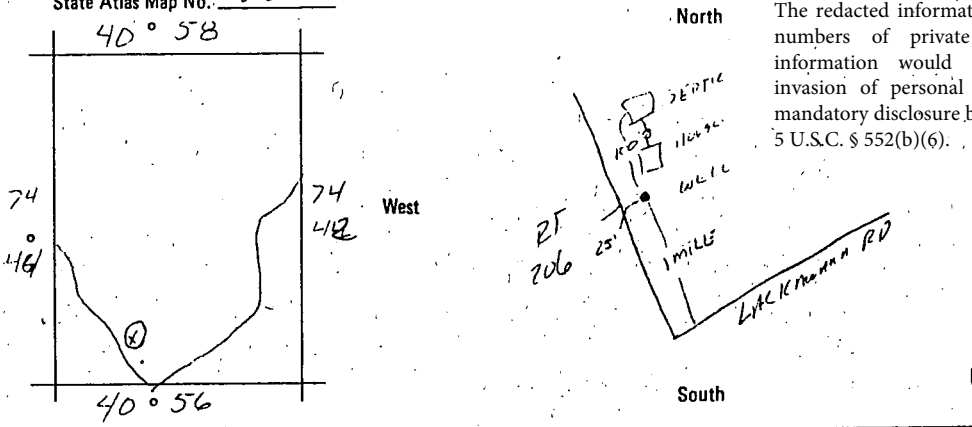
Diameter of Well	6 Inches	Proposed Depth of Well	Unknown Feet
Proposed Capacity of Pump	7 GPM	Method of Drilling (cable-tool,rotary,etc.)	Rotary
Use of Well (See Reverse)	Domestic (Replacement)		

LOCATION OF WELL

Lot #	Block #	Municipality	County
10	226	Byram	Sussex

State Atlas Map No. 22

Draw sketch showing distance and relations of well site to nearest public roads, streets, septic systems, etc.



The redacted information consists of names and/or phone numbers of private individuals. Disclosure of this information would constitute a clearly unwarranted invasion of personal privacy and thus is exempt from mandatory disclosure by virtue of Exemption 6 of the FOIA, 5 U.S.C. § 552(b)(6).

SEE REVERSE SIDE for IMPORTANT PROVISIONS AND REGULATIONS pertaining to this permit. APPROVAL of this permit is made SUBJECT TO acceptance of and compliance with the following ADDITIONAL CONDITIONS.

- ☐ Pinelands - Well must be drilled over 100' deep or a clay layer at least 4' in thickness must be encountered.
- ☐ It is necessary that Geophysical Logs of this well be made. Permanent pumping equipment SHALL NOT be installed until such logs are made.
- ☐ Authorization by rule under N.J.A.C. 7:14A-1 et seq.
- ☐ Samples of cuttings required every _____ feet or change in material.
- ☐ The results of a volatile organic scan mut be obtained prior to using the water and submitted to _____
- ☐ Domestic Potable Water Supply - The service line for water from the public community water supply system shall be turned off at the curb cock, and the meter shall be removed by the water purveyor.
- ☐ Domestic Irrigation Supply - No piping from the well for which the permit applies shall enter any building.
- ☐ Industrial/Commercial Supply - A physical connection permit shall be obtained pursuant to the provisions of N.J.A.C. 7:10-10-1 et seq., and a vigorous cross connections control program shall be instituted and maintained within the premises.
- ☐ Heat Pump Wells - Wells must be 50 feet apart and the water must be returned to the same aquifer as the production well.
- ☐ _____

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
NOV 19 1987

In compliance with R.S. 58:4A-14, application is made for a permit to drill a well as described above.

Date Nov. 2, 1987

Signature of Owner S/ Glenn Pizzybyszewski

COPIES: Water Allocation – White | Health Dept. – Yellow | Owner – Blue | Driller – White

355

FORM #3500 (Rev. 6/87)

DRIVEWAY

ROUTE 206

A CERTIFICATE OF COMPLIANCE CANNOT BE ISSUED UNTIL WELL DRILLER SUBMITS BOARD OF HEALTH COPY OF STATE WELL WATER RECORD

EDGE PAVEMENT

WATER SYSTEM DESIGN APPROVED BY:
SUSSEX CO. HEALTH DEPT.
SIGNED SB
DATE 11/19/87

U.S. ROUTE 206

MINIMUM OF 50' OF CASING REQUIRED

TO NE

ATTACHMENT K10

JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

WELL RECORD

Well Permit No. 22- 26453

22.41.576

use the space below for the log description. Note water bearing zones
gical formation.

Are samples available? ☐ Yes ☒ No

Drilling Method _____

Type of Rig Rotary

Aquifer/Geo. Fm. _____

LOG

0 - 3' - Overburden

3' - 120' - Limestone

DEP USE ONLY

Storet Hydrogeo Code _____

USGS Hydrogeo Code _____

Depth to Bedrock _____ ft.

Bedrock Lith. Code _____

Bedrock Fm. Code _____

Completed by _____

Date ____ / ____ / ____

Thick.	Lith.	Fm.

GWPJ No. ____ - _____

NJPDES No. _____ - ____

Latitude ____ ° ____ ' ____ "

Longitude ____ ° ____ ' ____ "

Lat-Long Accuracy ☐ 1" ☐ 5" ☐ 10" ☐ 20"

USGS Quadrangle _____

Drainage Basin Code _____

County/Municipality Code _____

OTHER FILES: ☐ Lithologic Log ☐ Samples Available ☐ Aquifer Test ☐ Water Level Data
☐ Geophysical Logs ☐ Water Chemistry ☐ Pollution Case

Checked by _____

Date ____ / ____ / ____

ATTACHMENT K11

Dave = We have no information on this well. We'll try again if you can't get it from Mr. Kapsos on the 16th.

June 7, 1994

Byram Township Environmental Commission
10 Mansfield Drive
Stanhope, N.J. 07874

Konstantine Kapsos
Mountainside Restaurant ——→ 347-8787
198 Route 206
Andover, N.J. 07821

Dear Mr. Kapsos:

This is to remind you that David Dibblee and David Triggs of the New Jersey Department of Environmental Protection and Energy (NJDEPE) will come to your restaurant on June 16 to gather water samples for testing.

They will be working in the area all day and so may be at your place anytime from about 9 a.m. to 4 p.m. I've asked them to try to get there in the morning and that seems likely.

Thank you again for agreeing to participate and help Byram Township find out whether the old dumpsite on Cat Swamp Hill presents a hazard. If you have any questions, please call me at 347-2358.

Yours truly,

Margaret McGarrity, Chairwoman
Byram Township Environmental Commission

ATTACHMENT K12

Dave = well is 150
casing 50
more information attached.

COPY

RECEIVED
JUN 8 1994

June 7, 1994

Byram Township Environmental Commission
10 Mansfield Drive
Stanhope, N.J. 07874

The Stone House (76rs Restaurant) → phone 347-9780
c/o Mazzei
54 Richmond Road
Stanhope, N.J. 07874

He may not be there but there is a spigot in front + back yard can use. He says the dump was operating as early as 1941.

Dear Mr. Mazzei:

This is to remind you that David Dibblee and David Triggs of the New Jersey Department of Environmental Protection and Energy (NJDEPE) will come to your restaurant on June 16 to gather water samples for testing.

They will be working in the area all day and so may be at your place anytime from about 9 a.m. to 4 p.m. I've asked them to try to get there in the morning and that seems likely.

Thank you again for agreeing to participate and help Byram Township find out whether the old dumpsite on Cat Swamp Hill presents a hazard. If you have any questions, please call me at 347-2358.

Yours truly,

Margaret McGarrity, Chairwoman
Byram Township Environmental Commission

ATTACHMENT K13

NEWTON, NEW JERSEY 07860
948-5400

APPLICATION FOR WELL PERMIT

Individual and Semipublic Water Supply Code of New Jersey

Installation: New WELL Date SEPT. 30 - 1982

Address of Building ROUTE 206

Map Name, if any - (STATE PERMIT # 22-2174)

Municipality BYRAM Block 70 Lot 9

Owner's Name (Print) STONE HOUSE INC 76ER RESTAURANT

Name and Address of Well Driller D.F. WELL DRILLING CO. INC

BOX 8 NETCONG. N.J.

Type of Building to be Served: Dwelling CERTIFICATE OF COMPLIANCE Garage Other MINIMUM OF 50' OF CASING REQUIRED

A CERTIFICATE OF COMPLIANCE CANNOT BE ISSUED UNTIL WELL DRILLER SUBMITS BOARD OF HEALTH COPY OF STATE WELL WATER RECORD (FORM W.A.)

TYPE OF WELL

(1) Drilled X (5) Estimated Depth 200

(2) Driven (6) Method of Sealing CEMENT GROUT

(3) Spring (7) Pumping Equipment SUBMERSIBLE

(4) Surface (8) Storage Facilities 80 GALLON TANK

(9) Purification Facilities HTH

Make an accurate sketch on a separate sheet and attach to this application showing: Lot dimensions, location of house, location of proposed water supply system, and all buildings. Include distance from house, side and rear lot lines, auxiliary buildings, large trees and sewage systems within 100 feet.

The undersigned agrees to locate, construct or alter the above described individual water supply system in accordance with the standards of the New Jersey State Department of Health and the ordinances of the Municipality of BYRAM and in particular in accordance with the individual and Semipublic water supply code of New Jersey, adopted by the Board of Health of Twp and to accurately follow the layout set forth herein.

OCT 6 1982

WATER SYSTEM DESIGN APPROVED BY
SUSSEX CO. HEALTH DEPT.
SIGNED SCS
DATE 10-6-82

Willard J Thilly
Owner or Well Driller
FOR DF WELL DRILLING

BYRAM TOWNSHIP
BOARD OF HEALTH

10-5-82
Recd $50 Check # 5425
J. Eibs

3/77 orig

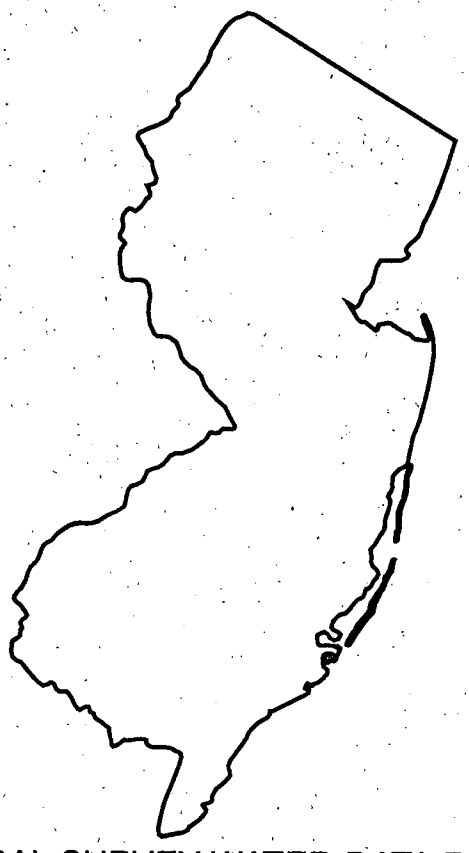
#360

ATTACHMENT EW2 K14

ATTACHMENT L

Water Resources Data New Jersey Water Year 1992

Volume 1. Surface-Water Data



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NJ-92-1

Prepared in cooperation with the New Jersey Department of Environmental Protection and Energy and with other agencies

01455801 MUSCONETCONG RIVER AT LOCKWOOD, NJ

LOCATION.--Lat 40°55'10", long 74°44'07", Sussex County, Hydrologic Unit 02040105, at bridge in Lockwood, at boundary between Sussex County and Morris County, 0.2 mi southeast of Cage Hill, 0.4 mi south of Jefferson Lake, and 0.9 mi downstream from Lubbers Run.

DRAINAGE AREA.--60.1 mi^2.

PERIOD OF RECORD.--Water years 1976 to October 1991 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, water-phase nutrients, and BOD were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1991 17...	1230	50	346	7.6	10.0	10.6	95	2.8	5400	>2400

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1991 17...	110	28	10	24	2.4	78	21	52	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT 1991 17...	8.7	197	0.053	0.047	0.76	0.78	0.28	0.28	1.2

DATE	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1991 17...	1.1	2.0	1.8	0.04	<0.02	7.1	1.1	3	0.41

01456200 MUSCONETCONG RIVER AT BEATTYSTOWN, NJ

LOCATION.--Lat 40°48'48", long 74°50'32", Warren County, Hydrologic Unit 02040105, at bridge at Beattystown, 1.6 mi upstream of Hanes Brook, 2.1 mi northeast of Stephensburg, and 3.5 mi northeast of Scrappy Corner.

DRAINAGE AREA.--90.3 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, water-phase nutrients, and BOD were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER OCTOBER 1991 TO SEPTEMBER 1992

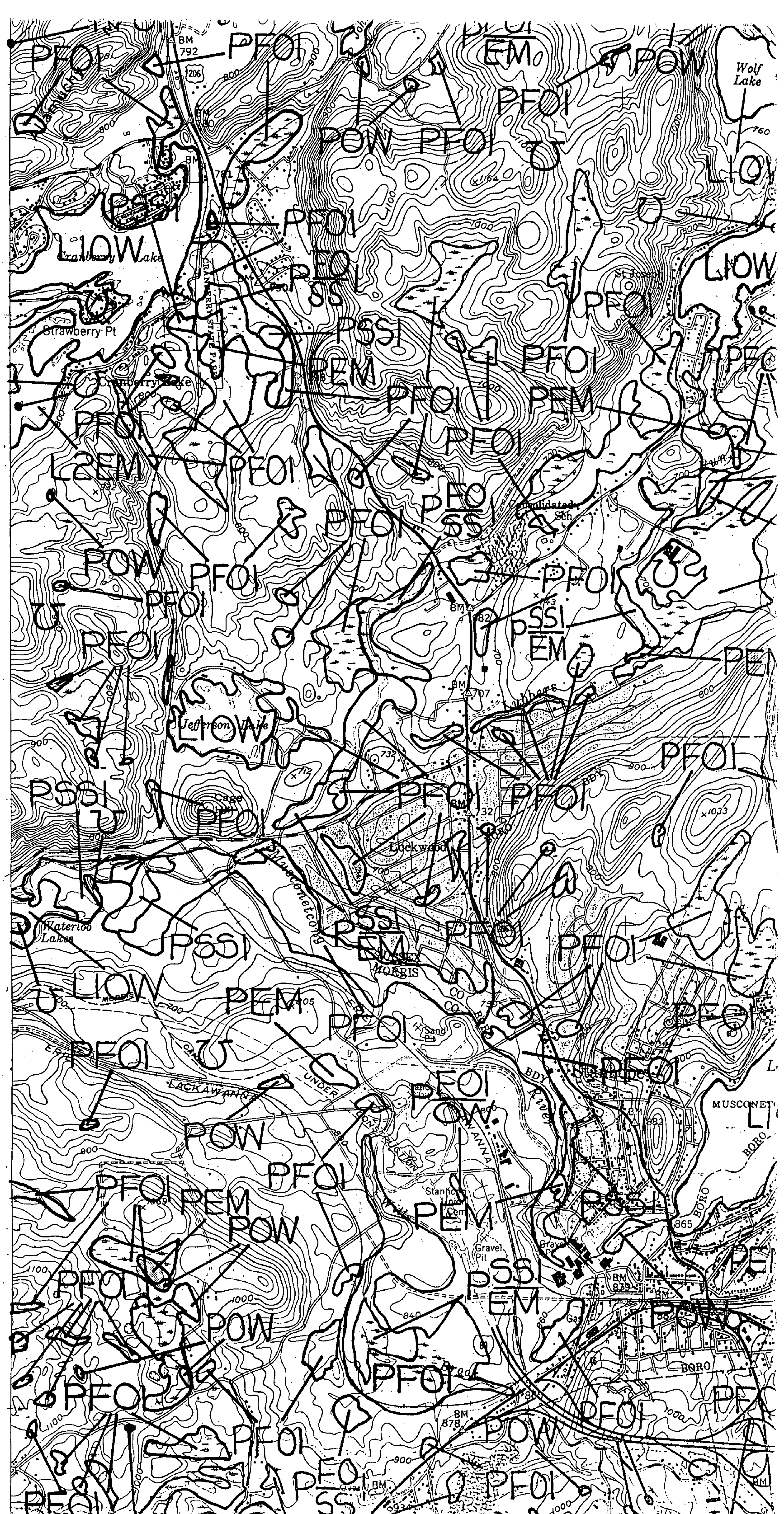
DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
JAN 1992										
29...	1100	120	336	8.6	2.0	13.7	99	6.1	<20	<10
APR										
01...	1300	180	267	8.7	8.0	13.1	114	E1.8	20	<10
JUN										
17...	1030	100	342	8.1	21.0	9.1	102	<1.0	3500	150
AUG										
12...	1100	53	392	8.4	21.5	9.4	108	E1.7	2400	770

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JAN 1992									
29...	100	26	8.7	22	1.1	64	22	48	0.1
APR									
01...	85	21	8.0	18	1.0	58	18	37	0.2
JUN									
17...	100	25	10	24	1.4	75	20	49	0.1
AUG									
12...	140	31	14	25	1.9	107	18	50	0.4

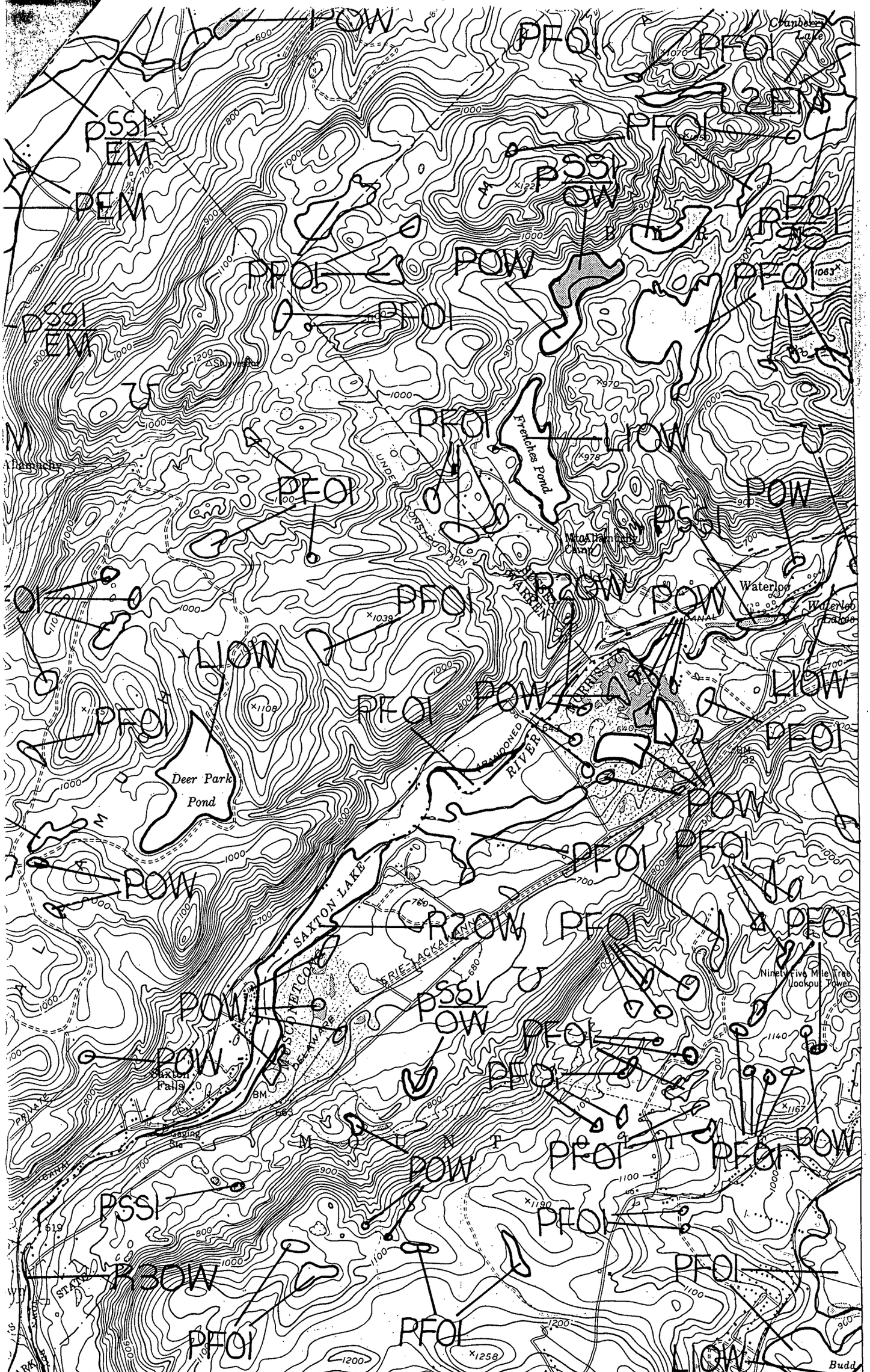
DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)
JAN 1992									
29...	5.1	174	0.017	0.018	0.63	0.61	0.23	0.21	0.60
APR									
01...	5.6	147	0.019	0.019	0.72	0.75	0.18	0.11	0.47
JUN									
17...	5.4	184	0.044	0.042	0.85	0.88	0.18	0.11	0.64
AUG									
12...	6.1	215	0.087	0.081	0.92	0.87	0.21	0.16	0.85

DATE	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
JAN 1992									
29...	0.75	1.2	1.4	0.07	0.04	3.3	0.5	4	1.3
APR									
01...	0.38	1.2	1.1	0.03	0.04	3.0	0.5	6	2.9
JUN									
17...	0.52	1.5	1.4	0.05	0.02	3.6	0.3	6	1.6
AUG									
12...	0.39	1.8	1.3	0.33	0.03	3.4	1.6	56	8.0

ATTACHMENT M



Wolf Lake
Cranberry Lake
Strawberry Pt
Jefferson Lake
Waterloo Lakes
Lockwood
Cage Hill
St Joseph
Consolidated Sch
Lubbers
Musconetcong
MORRIS
Stanhope
Stanhope Union Cem
MUSCONETCONG
LACKAWANNA
UNDER CONSTRUCTION
Sand Pit
Gravel Pit
BORO
BDY
CRANBERRY LAKE STATE PARK
PFOI
PEM
POW
PSSI
L1OW
L2EM
PFOI/EM
PFO/SS
PSSI/EM
PFOI/OW
PFOI/SS



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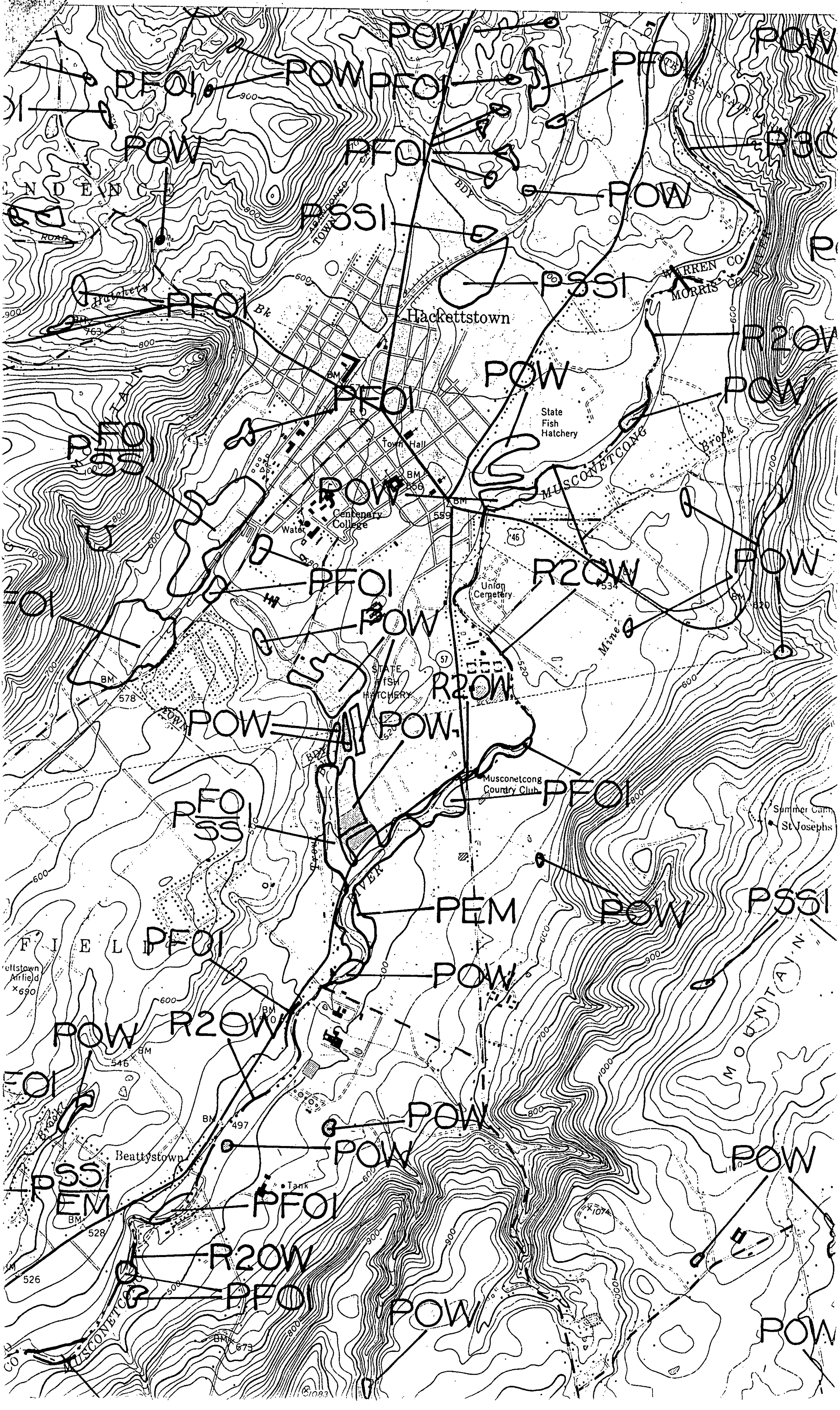
TRANQUILITY N.J.


Hackettstown
State Fish Hatchery
Town Hall
Centenary College
Water
Union Cemetery
STATE FISH HATCHERY
Musconetcong Country Club
MUSCONETCONG
WARREN CO
MORRIS CO
Summer Camp
St Josephs
Beattystown
Hackettstown Airfield
MOUNTAIN
Hatchery Bk
Mine Brook
Brook
POW
PFOI
PSSI
R2OW
PEM
R3OW
PFO/SS1
PSS1/EM

ATTACHMENT N

NEW JERSEY DIVISION OF FISH, GAME AND WILDLIFE
1995 SPRING TROUT STOCKING SCHEDULE

WATERBODY	PRESEASON	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	TOTAL
Mohawk Pond	180	0	140	140	140	140	0	0	740
Monksville Reservoir	1000	0	1000	0	1000	0	1000	0	4000
Mountain Lake	440	0	330	330	330	0	0	0	1430
Mt. Hope Pond	410	0	310	310	310	0	0	0	1340
Mulhockaway Creek	370	0	150	150	150	150	100	0	1070
Mullica Hill Pond	410	0	310	310	310	0	0	0	1340
Musconetcong River - Lower	9920	4330	3850	3970	3850	3850	2410	2480	34660
Musconetcong River - Upper	2890	1300	1160	1160	1160	1160	720	720	10270
Neldon Brook	190	0	190	0	190	0	0	0	570
Neshanic River	280	0	110	0	110	0	0	0	500
Oldham Pond	440	0	330	330	330	0	0	0	1430
Papakating Creek	700	0	280	0	280	0	0	0	1260
Papakating Creek W/B	240	0	240	240	0	0	0	0	720
Pascack Creek	610	0	250	250	250	250	0	0	1610
Passaic River	1540	0	620	620	620	620	0	0	4020
Paulins Kill - Lower	6480	2910	2590	2590	2590	2590	1620	1620	22990
Paulins Kill - Middle	770	350	310	310	310	310	190	190	2740
Paulins Kill - Upper	1350	400	360	540	360	360	220	340	3930
Peapack Brook	500	0	200	200	200	200	120	0	1420
Pequannock River	2060	0	830	830	830	830	520	520	6420
Pequest River - Lower	5560	2500	2220	2220	2220	2220	1390	1390	19720
Pequest River - Middle	1710	770	680	680	680	680	430	430	6060
Pequest River - Upper	650	290	260	260	260	260	160	160	2300
Pine Brook	150	0	150	0	150	0	0	0	450
Pohatcong Creek - Lower	3550	1600	1420	1420	1420	1420	890	890	12610
Pohatcong Creek - Upper	600	0	240	0	240	0	0	0	1080
Pompton Lake	440	0	330	330	330	0	0	0	1430
Pompton River	1890	0	760	760	760	760	0	0	4930
Pond Brook	110	0	100	100	100	100	100	0	610
Pophandusing Creek	220	0	220	0	220	0	0	0	660
Prospertown Lake	360	0	270	270	270	0	0	0	1170
Rahway River	2390	0	960	960	960	960	0	0	6230
Ramapo River	4300	1930	1720	1720	1720	1720	1070	1070	15250
Rancocas Creek SW/B	430	0	170	170	170	170	0	0	1110
Raritan River	1260	0	500	500	500	500	0	0	3260
Raritan River N/B	4590	2060	1830	1830	1830	1830	1150	1150	16270
Raritan River S/B - Lower	2890	1300	1160	1160	1160	1160	720	720	10270
Raritan River S/B - Middle	8880	4000	3550	3550	3550	3550	2220	2220	31520
Raritan River S/B - Upper	1310	480	430	520	430	430	270	330	4200
Ringwood Brook	250	0	100	100	100	100	100	0	750
Roaring Rock Brook	350	0	350	0	350	0	0	0	1050
Rock Brook	370	0	0	370	0	0	0	0	740
Rockaway Creek	230	0	100	100	100	100	0	0	630
Rockaway Creek S/B	230	0	100	100	100	100	100	0	730
Rockaway River	5940	2670	2380	2380	2380	2380	1480	1480	21090
Roosevelt Park Pond	450	0	340	340	340	0	0	0	1470
Rosedale Lake	510	0	390	390	390	0	0	0	1680
Round Valley Reservoir	0	0	3870	0	2580	0	5160	0	11610
Roy Spring Brook	160	0	0	160	0	0	0	0	320

ATTACHMENT O

RECEIVED
OCT 4 1994

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRISTINE TODD WHITMAN
Governor

ROBERT C. SHINN, JR.
Commissioner

SEP 29 1994

MEMORANDUM

TO: Frank Sorce
Site Assessment Section

THROUGH: Greg Toffoli 9/29/94
Joseph Sanguiliano 9/29/94
Quality Assurance Section
Bureau of Environmental Measurements and Quality Assurance

FROM: Linda M. Appel LA 9/29/94
Quality Assurance Section
Bureau of Environmental Measurements and Quality Assurance

SUBJECT: Analytical data validation of the June 16, 1994 sampling event conducted at **Cat Swamp Hill Dump, Byram Township.** Analyses for TCL by NYTEST Environmental, Inc.

Samples Reviewed

Field ID	Lab ID	Matrix	Collection Date
459	2108601	Soil	06/16/94
460	2108604	Soil	06/16/94
461	2108605	Soil	06/16/94
462	2108606	Soil	06/16/94
463	2108607	Soil	06/16/94
464	2108608	Soil	06/16/94
465	2108609	Soil	06/16/94
466	2108610	Soil	06/16/94
467	2108611	Soil	06/16/94
468	2108612	Soil	06/16/94
469	2108613	Soil	06/16/94
470	2108614	Soil	06/16/94
471	2108615	Soil	06/16/94
472	2108616	Soil	06/16/94
473	2108617	Soil	06/16/94
474	2108618	Soil	06/16/94

ATTACHMENT L1

476	2108619	Soil	06/16/94
477	2108620	Soil	06/16/94
478	2108621	Soil	06/16/94
480	2108622	Soil	06/16/94
481	2108623	Soil	06/16/94
482	2108624	Soil	06/16/94
484	2108625	Soil	06/16/94
485	2108626	Soil	06/16/94
486	2108627	Soil	06/16/94
487	2108628	Soil	06/16/94
488	2108629	Water	06/16/94
489	2108632	Water	06/16/94
490	2108633	Water	06/16/94
491	2108634	Water	06/16/94
493	2108635	Water	06/16/94
496	2108636	Water	06/16/94
497	2108637	Water	06/16/94

The Quality Assurance Section, Bureau of Environmental Measurements and Quality Assurance, Division of Publicly Funded Site Remediation has reviewed the above mentioned samples for Volatile Organics, Semivolatile Organics, Pesticides and PCBs. Please refer to the detailed data validation report and the target and non-target analyte data summary for additional information. Specific comments are provided below.

GENERAL COMMENTS

The analytical data package was well organized and all data deliverables were present.

VOLATILE ORGANICS

The Volatile Organics analyses were performed according to the CLP Statement of Work (Document No. OLM01.8) and the data are acceptable. Minor qualifications are noted on the target and non-target analyte data summary.

SEMIVOLATILE ORGANICS

The Semivolatile Organics analyses were performed according to the CLP Statement of Work (Document No. OLM01.8). Please note the following rejections or qualifications due to analytical deficiencies:

1. The initial analysis of sample 466 was performed at low level with one unacceptable internal standard area and three unacceptable base-neutral surrogate percent recoveries. The laboratory performed a re-extraction/re-analysis at medium level. All internal standard areas and surrogate percent recoveries were acceptable; however, the re-extraction exceeded the holding time by 25 days. Therefore, the base-neutral fraction data in the original analysis are rejected and the data from the medium level re-extraction/re-analysis are rejected. The data from the original analysis for the acid-extractable fraction are acceptable.

ATTACHMENT L2

2. Sample 481 was chosen as one of the samples for the Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis. In the original extraction, the laboratory inadvertently added the matrix spiking solution to samples 480 and 485 instead of 481MS and 481MSD. The laboratory performed a re-extraction/re-analysis of samples 480, 481, 481MS, 481MSD and 485. However, the re-extraction exceeded the holding time by 25 days. Therefore, all data for samples 480RE, 481RE, 481MSRE, 481MSDRE and 485RE are rejected. The data from the initial analysis of sample 481 are acceptable. Except for the matrix spiking compounds, the data from the original analysis of samples 480 and 485 are acceptable. The data for the following analytes used as matrix spiking compounds are rejected in samples 480 and 485: Phenol, 2-Chlorophenol, 1,4-Dichlorobenzene, N-Nitroso-di-n-propylamine, 1,2,4-Trichlorobenzene,4-Chloro-3-methylphenol,Acenaphthene,4-Nitrophenol,2,4-Dinitrotoluene, Pentachlorophenol and Pyrene.

3. The following samples had one or more unacceptable internal standard areas in the initial analysis: 470, 473, 476, 477, 478 and 480. Samples 470, 473, 476, 477 and 478 were re-analyzed and a matrix effect was exhibited. Therefore, the data from the original analysis are acceptable with qualifications as noted on the target and non-target analyte data summary. Sample 480 was re-extracted and re-analyzed but the re-extraction exceeded the holding time by 25 days. The data from the original analysis are acceptable with qualifications as noted on the target and non-target analyte data summary (except for those analytes specifically mentioned above in #2). All non-detects (NDs) associated with Internal Standards whose area is less than 50% of the area of the daily standard, are considered estimated and qualified "UJ". For a list of the Internal Standards and the associated analytes, please refer to Attachment A.

4. Sample 466 was analyzed at a 1:10 dilution only and samples 467, 468, 469, 470, 470RE, 471, 472, 474, 476, 476RE and 480 were analyzed at 1:2 dilutions only. In the case narrative, the laboratory states that this was due to the viscous nature of the sample extracts. The end user is alerted that contamination may exist below the elevated detection limits for these samples.

5. Several of the percent recoveries and/or %RPDs were outside the acceptable QC limits in the MS/MSD analyses of samples 459, 481 and 488. No action is required.

6. Several samples have non-target peaks (which appear to be greater than 10% of the nearest eluting Internal Standard) for which a library search was not performed. These peaks elute either with or near a target analyte and when the automated library search is performed, these peaks are excluded from the library search as are the Internal Standards and surrogates. An example of this oversight may be found in sample 478. The chromatogram displays two significant non-target peaks at approximate retention times 21.0 and 23.0 minutes. However, neither of these peaks are listed on Form 1F. If the end user is concerned with tentative identification of the non-target analytes, the laboratory should be contacted, the chromatograms re-reviewed and a manual library search for those overlooked non-target peaks performed.

ATTACHMENT L3

PESTICIDES and PCBs

The Pesticide and PCB analyses were performed according to the CLP Statement of Work (Document No. OLM01.8) and the data are acceptable. Please note the following:

1. Several samples had surrogate percent recoveries which were outside the advisory QC limits. This may be due to matrix interference and no action is required. Some surrogate compounds were not recovered in the diluted samples. Again, no action is required. Sample 482 had no surrogate recovery, possibly due to a laboratory error. The laboratory stated in the case narrative that a re-extraction and re-analysis would be performed and the data would be submitted at a later date. Until the data for the re-extraction/re-analysis is received, the Pesticide and PCB data for sample 482 is conditionally rejected.

2. On the Pesticide forms, the laboratory entered %D values in all the fields where %RPD was requested. The data is not affected since all %RPD values would be acceptable.

3. The laboratory analyzed the GPC Pesticide Check Mixture and the Aroclor Check Mixture on an instrument (HP2) different from the instrument (HP3) on which the samples were analyzed. Although this issue is not addressed in the Statement of Work, it is a sound laboratory practice to analyze field samples and associated QC samples on the same instrument.

4. Sample 468 was analyzed at 1:3 and 1:50 dilutions and sample 472 was analyzed at 1:8 and 1:100 dilutions. The end user is alerted that contamination may exist below the elevated detection limits for these two samples.

If you have any questions regarding this review, please do not hesitate to contact this office at 633-0752.

Attachment

c. William Lowry, BEMQA

ATTACHMENT LA

TARGET & NON-TARGET ANALYTE DATA SUMMARY

SITE NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

LAB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
459	VOA	Methylene Chloride	U	5 J	5 J	qualify	6
		No TICs were reported.					
	SVOA	Bis(2-ethylhexyl)phthalate	64 J	560 B	560 JB	qualify	3
		21 TICs were reported.					
		RT 4.95	15000 J	23000 JB	23000 JB	negate	1
		RT 27.76	350 J	400 JB	400 JB	negate	1
		The remaining 19 TICs are acceptable.				qualify	9
	PEST/PCB	4,4'-DDE	U	6.1	6.1		
		4,4'-DDD	U	4.3	4.3		
		4,4'-DDT	U	15	15		
		Aroclor 1260	U	58	58		
460	VOA	Methylene Chloride	1 J	2 JB	2 JB	negate	1
		1 TIC was reported.					
		RT 21.31	U	31 J	31 J	negate	3
	SVOA	Phenol	U	150 J	150 J	qualify	6
		Diethylphthalate	U	510	510		
		Pentachlorophenol	U	480 J	480 J	qualify	6
		Butylbenzylphthalate	U	470	470		
		21 TICs were reported.					
		RT 4.90	15000 J	13000 JB	13000 JB	negate	1
		The remaining 20 TICs are acceptable.				qualify	9
	PEST/PCB	Endrin	U	18 J	18 J	qualify	11
		Aroclor 1242 (1/50 dilution)	U	24000 D	24000 D		10

ATTACHMENT L5

TARGET & NON-TARGET ANALYTE DATA SUMMARY

E NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
461	VOA	Methylene Chloride	U	3 J	3 J	qualify	6
		2 TICs were reported.					
		RT 17.18	U	30 J	30 J	negate	3
		RT 21.32	U	82 J	82 J	negate	3
	SVOA	No target analytes were detected.					
		4 TICs were reported.					
		RT 4.90	15000 J	19000 JB	19000 JB	negate	1
		The remaining 3 TICs are acceptable.				qualify	9
	PEST/PCB	Pesticides or PCBs were not detected.					
462	VOA	Methylene Chloride	U	4 J	4 J	qualify	6
		2 TICs were reported.					
		RT 17.19	U	6 J	6 J	negate	3
		RT 21.30	U	14 J	14 J	negate	3
	SVOA	No target analytes were detected.					
		8 TICs were reported.					
		RT 4.89	15000 J	16000 JB	16000 JB	negate	1
		The remaining 7 TICs are acceptable.				qualify	9
	PEST/PCB	Pesticides or PCBs were not detected.					

ATTACHMENT L6

TARGET & NON-TARGET ANALYTE DATA SUMMARY

E NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
463	VOA	Methylene Chloride	1 J	2 JB	2 JB	negate	1
		2 TICs were reported.					
		RT 17.17	U	7 J	7 J	negate	3
		RT 21.31	U	8 J	8 J	negate	3
	SVOA	No target analytes were detected.					
		8 TICs were reported.					
		RT 4.89	15000 J	17000 JB	17000 JB	negate	1
		The remaining 7 TICs are acceptable.				qualify	9
	PEST/PCB	Pesticides or PCBs were not detected.					
464	VOA	Methylene Chloride	1 J	2 JB	2 JB	negate	1
		2 TICs were reported.					
		RT 17.18	U	9 J	9 J	negate	3
		RT 21.31	U	8 J	8 J	negate	3
	SVOA	No target analytes were detected.					
		6 TICs were reported.					
		RT 4.90	15000 J	17000 JB	17000 JB	negate	1
		The remaining 5 TICs are acceptable.				qualify	9
	PEST/PCB	Pesticides or PCBs were not detected.					

ATTACHMENT L7

TARGET & NON-TARGET ANALYTE DATA SUMMARY

E NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
465	VOA	Methylene Chloride	1 J	2 JB	2 JB	negate	1
		0 TICs were reported.					
	SVOA	No target analytes were detected.					
		8 TICs were reported.					
		RT 4.89	15000 J	18000 JB	18000 JB	negate	1
		The remaining 7 TICs are acceptable.				qualify	9
	PEST/PCB	Pesticides or PCBs were not detected.					
466	VOA	Methylene Chloride	1 J	4 JB	4 JB	negate	4
		1 TIC was reported.					
		RT 21.32	U	13 J	13 J	negate	3
	SVOA (1/10)	The BN fraction is rejected.				reject	12
		Acid extractables were not detected.					
		15 TICs were reported.					
		RT 4.81	15000 J	43000 JB	43000 JB	negate	1
		The remaining 14 TICs are acceptable.				qualify	9
	PEST/PCB	delta-BHC	U	2.7 J	2.7 J	qualify	11
		Heptachlor	U	2.2 J	2.2 J	qualify	6,11
		Aroclor 1254 (1/3 dilution)	U	1500 D	1500 D		10
		Aroclor 1260 (1/3 dilution)	U	2000 D	2000 D		10

ATTACHMENT L8

TARGET & NON-TARGET ANALYTE DATA SUMMARY

NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
467	VOA	Methylene Chloride	1 J	4 JB	4 JB	qualify	2,6
		2 TICs were reported.					
		RT 17.17	U	52 J	52 J	negate	3
		RT 21.32	U	43 J	43 J	negate	3
	SVOA (1/2)	Hexachlorobenzene	U	92 J	92 J	qualify	6
		Di-n-butylphthalate	U	290 J	290 J	qualify	6
		Bis(2-ethylhexyl)phthalate	64 J	890 B	890 JB	qualify	2
		21 TICs were reported.					
		RT 4.90	15000 J	23000 JB	23000 JB	negate	1
		The remaining 20 TICs are acceptable.				qualify	9
	PEST/PCB	Aroclor 1254	U	660	660		
		Aroclor 1260 (1/10 dilution)	U	4200 D	4200 D		10
468	VOA	Methylene Chloride	1 J	3 JB	3 JB	negate	1
		2 TICs were reported.					
		RT 17.17	U	11 J	11 J	negate	3
		RT 21.31	U	7 J	7 J	negate	3
	SVOA (1/2)	Diethyl phthalate	U	99 J	99 J	qualify	6
		Di-n-butylphthalate	U	130 J	130 J	qualify	6
		Butylbenzylphthalate	U	110 J	110 J	qualify	6
		Bis(2-ethylhexyl)phthalate	64 J	1200 B	1200 JB	qualify	2
		15 TICs were reported.					
		RT 4.86	15000 J	27000 JB	27000 JB	negate	1
		The remaining 14 TICs are acceptable.				qualify	9
	PEST/PCB	Methoxychlor (1/50 dilution)	U	5300 D	5300 D		10
		Aroclor 1248 (1/3 dilution)	U	1300	1300		
		Aroclor 1260 (1/3 dilution)	U	1500	1500		

ATTACHMENT L9

TARGET & NON-TARGET ANALYTE DATA SUMMARY

E NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
469	VOA	Methylene Chloride	1 J	3 JB	3 JB	negate	1
		1 TICs was reported.					
		RT 21.31	U	8 J	8 J	negate	3
	SVOA (1/2)	Bis(2-ethylhexyl)phthalate	64 J	280 B	280 JB	negate	4
		21 TICs were reported.					
		RT 4.87	15000 J	23000 JB	23000 JB	negate	1
		The remaining 20 TICs are acceptable.				qualify	9
	PEST/PCB	beta-BHC	U	6.2 J	6.2 J	qualify	11
		Aroclor 1254	U	190 J	190 J	qualify	11
		Aroclor 1260	U	510	510		
470	VOA	Methylene Chloride	1 J	3 JB	3 JB	negate	1
		2 TICs were reported.					
		RT 17.18	U	10 J	10 J	negate	3
		RT 21.31	U	9 J	9 J	negate	3
	SVOA (1/2)	Diethyl phthalate	U	280 J	280 J	qualify	6
		Di-n-butylphthalate	U	130 J	130 J	qualify	6
		Butylbenzylphthalate	U	210 J	210 J	qualify	6,8
		Bis(2-ethylhexyl)phthalate	64 J	1500 B	1500 JB	qualify	2,8
		NDs associated with Chrysene-d12				qualify	8
		21 TICs were reported.					
		RT 4.86	15000 J	28000 JB	28000 JB	negate	1
		The remaining 20 TICs are acceptable.				qualify	9
	PEST/PCB	Aroclor 1248 (1/2 dilution)	U	1200 D	1200 D		10
		Aroclor 1260 (1/2 dilution)	U	1000 D	1000 D		10

ATTACHMENT L10

TARGET & NON-TARGET ANALYTE DATA SUMMARY

E NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
471	VOA	Methylene Chloride	1 J	18 JB	18 JB	qualify	2,6
		Acetone	U	7 J	7 J	qualify	6
		2 TICs were reported.					
		RT 17.17	U	82 J	82 J	negate	3
		RT 21.31	U	120 J	120 J	negate	3
	SVOA (1/2)	Bis(2-ethylhexyl)phthalate	64 J	1000 JB	1000 JB	qualify	2
		13 TICs were reported.					
		RT 4.86	15000 J	29000 JB	29000 JB	negate	1
		The remaining 12 TICs are acceptable.				qualify	9
	PEST/PCB	Aroclor 1260 (1/5 dilution)	U	1600 D	1600 D		10
472	VOA	Methylene Chloride	1 J	13 JB	13 JB	qualify	2,6
		3 TICs were reported.					
		RT 17.17	U	58 J	58 J	negate	3
		RT 21.31	U	34 J	34 J	negate	3
		The remaining 1 TIC is acceptable.				qualify	9
	SVOA (1/2)	Phenol	U	210 J	210 J	qualify	6
		Pentachlorophenol	U	250 J	250 J	qualify	6
		Pyrene	U	110 J	110 J	qualify	6
		21 TICs were reported.					
		RT 4.85	15000 J	19000 JB	19000 JB	negate	1
		The remaining 20 TICs are acceptable.				qualify	9
	PEST/PCB	Aroclor 1260 (1/1000 dilution)	U	430000 D	430000 D		10

ATTACHMENT L11

TARGET & NON-TARGET ANALYTE DATA SUMMARY

T NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
473	VOA	Methylene Chloride	1 J	10 JB	10 JB	qualify	2,6
		1 TICs was reported at RT 21.31	U	11 J	11 J	negate	3
	SVOA	Phenanthrene	U	200 J	200 J	qualify	6
		Fluoranthene	U	280 J	280 J	qualify	6
		Pyrene	U	280 J	280 J	qualify	6,8
		Benzo(a)anthracene	U	160 J	160 J	qualify	6,8
		Chrysene	U	220 J	220 J	qualify	6,8
		Bis(2-ethylhexyl)phthalate	64 J	260 JB	260 JB	negate	4
		NDs associated with Chrysene-d12				qualify	8
		Benzo(b)fluoranthene	U	180 J	180 J	qualify	6
		Benzo(k)fluoranthene	U	150 J	150 J	qualify	6
		Benzo(a)pyrene	U	160 J	160 J	qualify	6
		16 TICs were reported.					
		RT 4.89	15000 J	21000 JB	21000 JB	negate	1
		The remaining 15 TICs are acceptable.				qualify	9
	PEST/PCB	Aroclor 1248	U	150	150		
		Aroclor 1260	U	120	110		13
474	VOA	Methylene Chloride	1 J	7 JB	7 JB	qualify	2,6
		2 TICs were reported.					
		RT 17.17	U	260 J	260 J	negate	4
		RT 21.31	U	300 J	300 J	qualify	5
	SVOA (1/2)	Bis(2-ethylhexyl)phthalate	64 J	84 JB	84 JB	negate	1
		16 TICs were reported.					
		RT 4.86	15000 J	21000 JB	21000 JB	negate	1
		The remaining 15 TICs are acceptable.				qualify	9
	PEST/PCB	Aroclor 1260	U	290	290		

ATTACHMENT L12

TARGET & NON-TARGET ANALYTE DATA SUMMARY

TE NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
476	VOA	Methylene Chloride	1 J	10 JB	10 JB	qualify	2,6
		0 TICs were reported.					
	SVOA (1/2)	Pentachlorophenol	U	730 J	730 J	qualify	6
		Di-n-butylphthalate	U	120 J	120 J	qualify	6
		Bis(2-ethylhexyl)phthalate	64 J	230 JB	230 JB	negate	1
		NDs associated with Chrysene-d12				qualify	8
		21 TICs were reported.					
		RT 4.86	15000 J	21000 JB	21000 JB	negate	1
		The remaining 20 TICs are acceptable.				qualify	9
	PEST/PCB	Aroclor 1254	U	680	680		
		Aroclor 1260	U	400 J	400 J	qualify	11
477	VOA	Methylene Chloride	2 J	4 JB	4 JB	negate	1
		Acetone	3 J	2 JB	2 JB	negate	1
		2 TICs were reported.					
		RT 17.17	U	15 J	15 J	negate	3
		RT 21.31	U	7 J	7 J	negate	3
	SVOA	4-Methylphenol	U	53 J	53 J	qualify	6
		Pentachlorophenol	U	160 J	160 J	qualify	6,8
		Pyrene	U	140 J	140 J	qualify	6,8
		Butylbenzylphthalate	U	100 J	100 J	qualify	6,8
		NDs assoiated with Phenanthrene-d10, Chrysene-d12 and Perylene-12				qualify	8
		21 TICs were reported.					
		RT 4.89	15000 J	16000 JB	16000 JB	negate	1
		The remaining 20 TICs are acceptable.				qualify	9
	PEST/PCB	Aroclor 1248	U	210	210		
		Aroclor 1260	U	57 J	57 J	qualify	11

ATTACHMENT L13

TARGET & NON-TARGET ANALYTE DATA SUMMARY

E NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

B NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
478	VOA	Methylene Chloride	2 J	2 JB	2 JB	negate	1
		Acetone	3J	2 JB	2 JB	negate	1
		The non-target data is acceptable.				qualify	9
	SVOA	1,4-Dichlorobenzene	U	160 J	160 J	qualify	6
		1,2-Dichlorobenzene	U	83 J	83 J	qualify	6
		Hexachloroethane	U	140 J	140 J	qualify	6
		Di-n-butylphthalate	U	86 J	86 J	qualify	6
		Pyrene	U	160 J	160 J	qualify	6,8
		NDs associated with Chrysene-d12				qualify	8
		21 TICs were reported.					
		RT 4.88	15000 J	9400 JB	9400 JB	negate	1
		The remaining 20 TICs are acceptable.				qualify	9
	PEST/PCB	Aroclor 1242 (1/20 dilution)	U	8300 JD	8300 JD	qualify	10,11

ATTACHMENT L14

TARGET & NON-TARGET ANALYTE DATA SUMMARY

E NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
480	VOA	Methylene Chloride	1 J	8 JB	8 JB	qualify	2,6
		1 TIC reported at RT 21.32	U	8 J	8 J	negate	3
	SVOA (1/2)	Phenol	U	2000	—	reject	7
		2-Chlorophenol	U	2000	—	reject	7
		1,4-Dichlorobenzene	U	1100	—	reject	7
		N-nitroso-di-n-propylamine	U	1300	—	reject	7
		1,2,4-Trichlorobenzene	U	1300	—	reject	7
		4-Chloro-3-Methylphenol	U	2300	—	reject	7
		Acenaphthene	U	1400	—	reject	7
		4-Nitrophenol	U	1800 J	—	reject	7
		2,4-Dinitrotoluene	U	1100	—	reject	7
		Pentachlorophenol	U	570 J	—	reject	7
		Pyrene	U	1200	—	reject	7
		Bis(2-ethylhexyl)phthalate	64 J	91 JB	91 JB	negate	1
		NDs associated with Chrysene-d12				qualify	8
		11 TICs were reported.					
		RT 4.87	15000 J	11000 JB	11000 JB	negate	1
		The remaining 10 TICs are acceptable.				qualify	9
	PEST/PCB	Pesticides or PCBs were not detected.					

ATTACHMENT L15

TARGET & NON-TARGET ANALYTE DATA SUMMARY

NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

B NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
481	VOA	Methylene Chloride	2 J	3 JB	3 JB	negate	1
		2 TICs were reported.					
		RT 17.17	U	34 J	34 J	negate	3
		RT 21.29	U	20 J	20 J	negate	3
	SVOA	Target analytes were not detected.					
		11 TICs were reported.					
		RT 4.89	19000 J	25000 JB	25000 JB	negate	1
		RT 16.95	83 J	180 J	180 JB	negate	1
		The remaining 9 TICs are acceptable.				qualify	9
	PEST/PCB	Aroclor 1258	U	180	180		
		Aroclor 1260	U	100 J	110		13
482	VOA	Methylene Chloride	1 J	8 JB	8 JB	qualify	2,6
		Tetrachloroethene	U	5 J	5 J	qualify	6
		3 TICs were reported.					
		RT 17.18	U	71 J	71 J	negate	3
		RT 21.31	U	22 J	22 J	negate	3
		The remaining 1 TIC is acceptable.				qualify	6
	SVOA	Bis(2-ethylhexyl)phthalate	52 J	110 JB	110 JB	negate	1
		18 TICs were reported.					
		RT 4.86	19000 J	18000 JB	18000 JB	negate	1
		The remaining 17 TICs are acceptable.					
	PEST/PCB	Pesticides or PCBs were not detected.				reject	7

ATTACHMENT L16

TARGET & NON-TARGET ANALYTE DATA SUMMARY

T NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
484	VOA	Methylene Chloride	2 J	20JB	20JB	negate	4
		0 TICs were reported.					
	SVOA	Bis(2-ethylhexyl)phthalate	52 J	400 JB	400 JB	negate	4
		21 TICs were reported.					
		RT 4.84	19000 J	100000 JB	100000 JB	negate	4
		RT 16.95	83 J	2800 J	2800 JB	qualify	5
		The remaining 19 TICs are acceptable.				qualify	9
	PEST/PCB	Pesticides or PCBs were not detected.					

ATTACHMENT L17

TARGET & NON-TARGET ANALYTE DATA SUMMARY

E NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
485	VOA	Methylene Chloride	2 J	16 JB	16 JB	negate	4
		Acetone	3 J	23 JB	23 JB	negate	4
		2-Butanone	U	32 J	32 J	qualify	6
		4-Methyl-2-Pentanone	U	10 J	10 J	qualify	6
		0 TICs were reported.					
	SVOA	Phenol	U	7700	—	reject	7
		2-Chlorophenol	U	8600	—	reject	7
		1,4-Dichlorobenzene	U	4500	—	reject	7
		N-nitroso-di-n-propylamine	U	5400	—	reject	7
		1,2,4-Trichlorobenzene	U	5800	—	reject	7
		4-Chloro-3-Methylphenol	U	8400	—	reject	7
		Acenaphthene	U	7000	—	reject	7
		4-Nitrophenol	U	8800 J	—	reject	7
		2,4-Dinitrotoluene	U	5500	—	reject	7
		Pentachlorophenol	U	3600 J	—	reject	7
		Pyrene	U	4400	—	reject	7
		Bis(2-ethylhexyl)phthalate	52 J	680 JB	680 JB	negate	4
		21 TICs were reported.					
		RT 4.90	19000 J	36000 JB	36000 JB	negate	1
		RT 16.97	83 J	1000 J	1000 JB	negate	4
		The remaining 19 TICs are acceptable.				qualify	9
	PEST/PCB	Aroclor 1260	U	57 J	57 J	qualify	6

ATTACHMENT L18

TARGET & NON-TARGET ANALYTE DATA SUMMARY

E NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Soil

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/Kg	LAB REPORT CONC ug/Kg	QA REPORT CONC ug/Kg	QA DECISIONS	FOOTNOTE
486	VOA	Methylene Chloride	2 J	4 JB	4 JB	negate	1
		4-Methyl-2-Pentanone	U	1 J	1 J	qualify	6
		0 TICs were reported.					
	SVOA	Fluoranthene	U	120 J	120 J	qualify	6
		Pyrene	U	84 J	84 J	qualify	6
		Benzo(a)anthracene	U	60 J	60 J	qualify	6
		Chrysene	U	80 J	80 J	qualify	6
		Bis(2-ethylhexyl)phthalate	52 J	80 JB	80 JB	negate	1
		14 TICs were reported.					
		RT 4.84	19000 J	21000 JB	21000 JB	negate	1
		RT 16.93	83 J	240 J	240 JB	negate	1
		The remaining 12 TICs are acceptable.				qualify	9
	PEST/PCB	Pesticides or PCBs were not detected.					
487	VOA	Methylene Chloride	2 J	3 JB	3 JB	negate	1
		2 TICs were reported.					
		RT 17.17	U	25 J	25 J	negate	3
		RT 21.31	U	22 J	22 J	negate	3
	SVOA	Bis(2-ethylhexyl)phthalate	52 J	160 JB	160 JB	negate	4
		18 TICs were reported					
		RT 4.36	79 J	88 JB	88 JB	negate	1
		RT 4.85	19000 J	23000 JB	23000 JB	negate	1
		RT 6.13	120 J	96 JB	96 JB	negate	1
		RT 16.94	83 J	290 J	290 JB	negate	4
		The remaining 14 TICs are acceptable.				qualify	9
	PEST/PCB	Aroclor 1260	U	15 J	15 J	qualify	6

ATTACHMENT L19

TARGET & NON-TARGET ANALYTE DATA SUMMARY

NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

NAME: NYTEST

SAMPLE MATRIX: Water

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/L	LAB REPORT CONC ug/L	QA REPORT CONC ug/L	QA DECISIONS	FOOTNOTE
488	VOA	Methylene Chloride	6 J	14 B	14 JB	negate	1
		Trichloroethene	U	4 J	4 J	qualify	6
		1 TIC reported at RT 18.04.	U	9 J	9 J	negate	3
	SVOA	No target analytes were detected.					
		4 TICs were reported.					
		RT 4.85	12 J	3 JB	3 JB	negate	1
		RT 6.97	7 J	3 JB	3 JB	negate	1
		RT 7.11	11 J	5 JB	5 JB	negate	1
		The remaining 1 TIC is acceptable.				qualify	9
	PEST/PCB	Pesticides or PCBs were not detected.					
489	VOA	Methylene Chloride	6 J	14 B	14 JB	negate	1
		3 TICs were reported.					
		RT 18.04	U	20 J	20 J	negate	3
		RT 22.17	U	9 J	9 J	negate	3
		The remaining 1 TIC is acceptable.				qualify	9
	SVOA	No target analytes were detected.					
		2 TICs were reported.					
		RT 4.85	12 J	4 JB	4 JB	negate	1
		RT 7.12	11 J	2 JB	2 JB	negate	1
	PEST/PCB	Pesticides or PCBs were not detected.					

ATTACHMENT L20

TARGET & NON-TARGET ANALYTE DATA SUMMARY

NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

B NAME: NYTEST

SAMPLE MATRIX: Water

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/L	LAB REPORT CONC ug/L	QA REPORT CONC ug/L	QA DECISIONS	FOOTNOTE
490	VOA	Methylene Chloride	6 J	14 B	14 JB	negate	1
		0 TICs were reported.					
	SVOA	No target analytes were detected.					
		2 TICs were reported.					
		RT 4.84	12 J	6 JB	6 JB	negate	1
		The remaining 1 TIC is acceptable.				qualify	9
	PEST/PCB	Pesticides or PCBs were not detected.					
491	VOA	Methylene Chloride	6 J	13 B	13 JB	negate	1
		0 TICs were reported.					
	SVOA	No target analytes were detected.					
		3 TICs were reported.					
		RT 4.85	12 J	5 JB	5 JB	negate	1
		RT 6.98	7 J	8 JB	8 JB	negate	1
		RT 7.10	11 J	12 JB	12 JB	negate	1
	PEST/PCB	Pesticides or PCBs were not detected.					

ATTACHMENT L21

TARGET & NON-TARGET ANALYTE DATA SUMMARY

TE NAME: Cat Swamp Hill Dump

SAMPLING DATE: June 16, 1994

AB NAME: NYTEST

SAMPLE MATRIX: Water

FIELD ID	FRACTION	ANALYTE	METHOD BLANK CONC ug/L	LAB REPORT CONC ug/L	QA REPORT CONC ug/L	QA DECISIONS	FOOTNOTE
493	VOA	Methylene Chloride	6 J	14 B	14 JB	negate	1
		Trichloroethene	U	4 J	4 J	qualify	6
		2 TICs were reported.					
		RT 18.04	U	10 J	10 J	negate	3
		RT 22.17	U	6 J	6 J	negate	3
	SVOA	No target analytes were detected.					
		7 TICs were reported.					
		RT 4.80	12 J	7 JB	7 JB	negate	1
		RT 6.93	7 J	13 JB	13 JB	negate	1
		RT 7.07	11 J	18 JB	18 JB	negate	1
		The remaining 4 TICs are acceptable.				qualify	9
	PEST/PCB	Pesticides or PCBs were not detected.					
496	VOA	Methylene Chloride	6 J	15 B	15 JB	negate	1
		3 TICs were reported.					
		The non-target data is acceptable.				qualify	9
497	VOA	Methylene Chloride	6 J	17 B	17 B	negate	1
		1 TIC was reported.					
		The non-target data is acceptable.				qualify	9

ATTACHMENT L22

FOOTNOTES:

1. The value reported in the sample is less than or equal to three (3) times the value in the method blank. It is the policy of NJDEP-DPFSR to negate the reported value due to probable contamination unrelated to the actual sample.

2. The value reported is greater than three (3) times the value in the method blank and is considered "real". However, the reported value must be quantitatively qualified "J" due to the method blank contamination. The "B" qualifier alerts the end-user to the presence of this analyte in the method blank.

3. The value reported is less than or equal to three (3) times the value in the trip/field blank. It is the policy of NJDEP-DPFSR to negate the reported value as due to probable contamination unrelated to the actual sample. The end-user, however, is alerted that a reportable quantity of the analyte was detected.

4. This sample concentration was corrected for the moisture content. The value reported prior to the % moisture correction is less than or equal to three (3) times the value in the method blank, trip blank or field blank. It is the policy of NJDEPE-DPFSR to negate the reported value due to probable laboratory contamination unrelated to the actual sample. The end-user is alerted that a reportable quantity of the analyte was detected.

5. This sample concentration was corrected for moisture content. The value reported prior to the % moisture correction is greater than three (3) times the value in the method blank, trip blank or field blank. The reported value must be quantitatively qualified "J" due to the blank contamination.

6. The reported concentration is quantitatively qualified because the concentration is below the CRQL.

7. Please refer to the cover memo for specific details.

8. The internal standard area did not meet the QC criteria. Therefore, all results using this internal standard for quantitation are quantitatively qualified.

9. The non-target compound is qualified "J" and considered quantitatively to be an estimated value because relative response factors are not calculated for non-target compounds.

10. The laboratory was required to dilute the samples to bring the peaks onto scale. The CLP program requires dilutions to be indicated with the "D" qualifier.

11. The reported analyte is qualified because the calculated concentrations on two different columns had a %D greater than 25%.

12. The fraction is rejected because three of the base-neutral surrogate percent recoveries are unacceptable.

13. The laboratory reported the incorrect concentration. The concentration reported by QAS is the correct value.

ATTACHMENT L23

FOOTNOTES:

1. The value reported in the sample is less than or equal to three (3) times the value in the method blank. It is the policy of NJDEP-DPFSR to negate the reported value due to probable contamination unrelated to the actual sample.

2. The value reported is greater than three (3) times the value in the method blank and is considered "real". However, the reported value must be quantitatively qualified "J" due to the method blank contamination. The "B" qualifier alerts the end-user to the presence of this analyte in the method blank.

3. The value reported is less than or equal to three (3) times the value in the trip/field blank. It is the policy of NJDEP-DPFSR to negate the reported value as due to probable contamination unrelated to the actual sample. The end-user, however, is alerted that a reportable quantity of the analyte was detected.

4. This sample concentration was corrected for the moisture content. The value reported prior to the % moisture correction is less than or equal to three (3) times the value in the method blank, trip blank or field blank. It is the policy of NJDEPE-DPFSR to negate the reported value due to probable laboratory contamination unrelated to the actual sample. The end-user is alerted that a reportable quantity of the analyte was detected.

5. This sample concentration was corrected for moisture content. The value reported prior to the % moisture correction is greater than three (3) times the value in the method blank, trip blank or field blank. The reported value must be quantitatively qualified "J" due to the blank contamination.

6. The reported concentration is quantitatively qualified because the concentration is below the CRQL.

7. Please refer to the cover memo for specific details.

8. The internal standard area did not meet the QC criteria. Therefore, all results using this internal standard for quantitation are quantitatively qualified.

9. The non-target compound is qualified "J" and considered quantitatively to be an estimated value because relative response factors are not calculated for non-target compounds.

10. The laboratory was required to dilute the samples to bring the peaks onto scale, the CLP program requires dilutions to be indicated with the "D" qualifier.

11. The reported analyte is qualified because the calculated concentrations on two different columns had a %D greater than 25%.

12. The fraction is rejected because three of the base-neutral surrogate percent recoveries are unacceptable.

13. The laboratory reported the incorrect concentration. The concentration reported by QAS is the correct value.

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRISTINE TODD WHITMAN
Governor

ROBERT C. SHINN, JR.
Commissioner

M E M O R A N D U M

TO: Frank Sorce
Site Assessment Section

NOV 16 1994

FROM: Joseph Sanguiliano JS 11/16/94
Quality Assurance Section
Bureau of Environmental Measurements and Quality Assurance

SUBJECT: Analytical Data Validation of the June 17, 1994 sampling event conducted at **Cat Swamp Hill Dump.** Analysis by NyTest Environmental Inc. Port Washington, N.Y.

SAMPLES REVIEWED

FIELD ID	LAB ID	COLLECTION DATE	MATRIX
459	108601	6/17/94	SOIL
460	108604	6/17/94	SOIL
461	108605	6/17/94	SOIL
462	108606	6/17/94	SOIL
463	108607	6/17/94	SOIL
464	108608	6/17/94	SOIL
465	108609	6/17/94	SOIL
466	108610	6/17/94	SOIL
467	108611	6/17/94	SOIL
468	108612	6/17/94	SOIL
469	108613	6/17/94	SOIL
470	108614	6/17/94	SOIL
471	108615	6/17/94	SOIL
472	108616	6/17/94	SOIL
473	108617	6/17/94	SOIL
474	108618	6/17/94	SOIL
476	108619	6/17/94	SOIL
477	108620	6/17/94	SOIL
478	108621	6/17/94	SOIL
480	108622	6/17/94	SOIL
481	108623	6/17/94	SOIL
482	108624	6/17/94	SOIL
484	108625	6/17/94	SOIL
485	108626	6/17/94	SOIL
486	108627	6/17/94	SOIL
487	108628	6/17/94	SOIL
488	108629	6/17/94	AQUEOUS
489	108632	6/17/94	AQUEOUS
490	108633	6/17/94	AQUEOUS
491	108634	6/17/94	AQUEOUS
493	108635	6/17/94	AQUEOUS

ATTACHMENT L25

The Quality Assurance Section, Bureau of Environmental Measurements and Quality Assurance, Division of Publicly Funded Site Remediation, has reviewed the above mentioned samples for Inorganics. Please refer to the detailed data validation report and the Target Analyte summary for additional information. Specific comments are provided below.

Inorganics

The Inorganics analysis was performed according to the CLP Statement of Work (Document ILM03.0) and the data are acceptable. Please note the following minor deficiencies:

Certain analytes were qualified because of the following QA/QC outliers: CRDL, sample spike, duplicate, serial dilution, and Graphite Furnace AA post spike analyses. Please refer to the Target Analyte Summary for the affected analytes.

If you have any questions concerning this review, please contact this office at 633-0752.

c. William Lowry, BEMQA

ATTACHMENT L26

Target Analyte Summary List

Site Name: **CAT SWAMP** Sampling Date: 6/17/94

Sample Analyte	Method Blank Conc.	Lab Report Conc.	QAS Report Conc.	QAS Decision	Footnotes
Sample 459					
INORGANICS(mg/kg):					
Aluminum	U	1800	1800		
Antimony	7.398 J	8.2 JB	8.2 JB	negate	6
Arsenic	U	7.7	7.7		
Barium	U	93.2	93.2		
Beryllium	U	1.0 J	1.0 J	qualify	1
Cadmium	U	0.45 UJ	0.45 UJ	qualify	2
Calcium	U	4570 J	4570 J	qualify	3
Chromium	U	36.4	36.4		
Cobalt	U	18.1	18.1		
Copper	U	22.7 J	22.7 J	qualify	2
Iron	U	36900	36900		
Lead	U	25.9	25.9		
Magnesium	U	5170	5170		
Manganese	U	741 J	741 J	qualify	2
Mercury	U	0.21	0.21		
Nickel	U	56.0 J	56.0 J	qualify	2
Potassium	U	870 J	870 J	qualify	1
Selenium	U	1.2 UJ	1.2 UJ	qualify	9
Vanadium	U	59.7	59.7		
Zinc	U	610 J	610 J	qualify	2
Sample 460					
INORGANICS(mg/kg):					
Aluminum	U	1800	1800		
Antimony	7.398 J	9.2 JB	9.2 JB	negate	6
Arsenic	U	2.7 J	2.7 J	qualify	1
Barium	U	348	348		
Beryllium	U	4.4	4.4		
Cadmium	U	3.3 J	3.3 J	qualify	2
Calcium	U	102000 J	102000 J	qualify	3
Chromium	U	35.3	35.3		
Cobalt	U	12.0	12.0		
Copper	U	1930 J	1930 J	qualify	2
Iron	U	43200	43200		
Lead	U	350 J	359 J	qualify	2
Magnesium	U	15500	15500		
Manganese	U	1680 J	1680 J	qualify	2
Nickel	U	56.0 J	56.0 J	qualify	2
Potassium	U	5040	5040		
Selenium	U	1.9 J	1.9 J	qualify	4, 5
Silver	U	3.4	3.4		
Sodium	U	824 J	824 J	qualify	1
Vanadium	U	37.1	37.1		
Zinc	U	12700 J	12700 J	qualify	2

ATTACHMENT L27

Sample	Analyte	Method Blank conc.	Lab Report Conc.	QAS Report Conc.	QAS Decision	Footnotes
Sample 461						
INORGANICS(mg/kg):						
	Aluminum	U	17500	17500		
	Antimony	7.398 J	7.0 UJ	7.0 UJ	qualify	2, 8
	Arsenic	U	3.0	3.0		
	Barium	U	80.9	80.9		
	Beryllium	U	1.6	1.6		
	Cadmium	U	1.1 J	1.1 J	qualify	1, 2
	Calcium	U	2940 J	2940 J	qualify	3
	Chromium	U	17.2 J	17.2 J	qualify	11
	Cobalt	U	16.1	16.1		
	Copper	U	28.9 J	28.9 J	qualify	2
	Iron	U	31000	31000		
	Lead	U	7.6	7.6		
	Magnesium	U	3050	3050		
	Manganese	U	654 J	654 J	qualify	2
	Nickel	U	9.9 J	9.9 J	qualify	2
	Potassium	U	1340	1340		
	Selenium	U	1.1 UJ	1.1 UJ	qualify	9
	Silver	U	1.9 J	1.9 J	qualify	1
	Vanadium	U	46.3	46.3		
	Zinc	U	205 J	205 J	qualify	2
Sample 462						
INORGANICS(mg/kg):						
	Aluminum	U	14000	14000		
	Antimony	7.398 J	7.1 UJ	7.1 UJ	qualify	2, 8
	Arsenic	U	1.9 J	1.9 J	qualify	1
	Barium	U	109	109		
	Cadmium	U	0.46 U	0.46 UJ	qualify	2
	Calcium	U	3490 J	3490 J	qualify	3
	Chromium	U	13.3 J	13.3 J	qualify	11
	Cobalt	U	11.0 J	11.0 J	qualify	1
	Copper	U	10.8 J	10.8 J	qualify	2
	Iron	U	27500	27500		
	Lead	U	4.0	4.0		
	Magnesium	U	3470	3470		
	Manganese	U	672 J	672 J	qualify	2
	Nickel	U	10.9 J	10.9 J	qualify	2
	Potassium	U	1340	1340		
	Selenium	U	1.2 UJ	1.2 UJ	qualify	9
	Silver	U	4.1 J	4.1 J	qualify	1
	Vanadium	U	29.9	29.9		
	Zinc	U	99.4 J	99.4 J	qualify	2
Sample 463						
INORGANICS(mg/kg):						
	Aluminum	U	40400	40400		
	Antimony	7.398 J	7.3 UJ	7.3 UJ	qualify	2, 8
	Arsenic	U	2.4 UJ	2.4 UJ	qualify	7
	Barium	U	110	110		
	Cadmium	U	0.47 UJ	0.47 UJ	qualify	2
	Calcium	U	14500 J	14500 J	qualify	3
	Chromium	U	52.9	52.9		
	Cobalt	U	23.8	23.8		
	Copper	U	2.4 UJ	2.4 UJ	qualify	2
	Iron	U	33900	33900		

ATTACHMENT L28

Sample	Analyte	Method Blank conc.	Lab Report Conc.	QAS Report Conc.	QAS Decision	Footnotes
	Lead	U	2.9 J	2.9 J	qualify	2
	Magnesium	U	8810	8810		
	Manganese	U	713 J	713 J	qualify	2
	Nickel	U	36.1 J	36.1 J	qualify	2
	Potassium	U	1950	1950		
	Selenium	U	1.2 UJ	1.2 UJ	qualify	7, 9
	Silver	U	2.9	2.9		
	Sodium	U	1880	1880		
	Vanadium	U	84.7	84.7		
	Zinc	U	143 J	143 J	qualify	2
Sample 464						
	INORGANICS(mg/kg):					
	Aluminum	U	15200	15200		
	Antimony	7.398 J	7.0 UJ	7.0 UJ	qualify	2, 8
	Arsenic	U	2.2 J	2.2 J	qualify	1
	Barium	U	64.8	64.8		
	Cadmium	U	0.45 UJ	0.45 UJ	qualify	2
	Calcium	U	1850 J	1850 J	qualify	3
	Chromium	U	16.5 J	16.5 J	qualify	11
	Cobalt	U	12.5	12.5		
	Copper	U	11.4 J	11.4 J	qualify	2
	Iron	U	29600	29600		
	Lead	U	10.3 J	10.3 J	qualify	2
	Magnesium	U	2800	2800		
	Manganese	U	519 J	519 J	qualify	2
	Nickel	U	14.3 J	14.3 J	qualify	2
	Potassium	U	1230	1230		
	Selenium	U	1.1 UJ	1.1 UJ	qualify	7, 9
	Silver	U	5.1	5.1		
	Vanadium	U	40.8	40.8		
	Zinc	U	104 J	104 J	qualify	2
Sample 465						
	INORGANICS(mg/kg):					
	Aluminum	U	16800	16800		
	Antimony	7.398 J	6.8 UJ	6.8 UJ	qualify	2, 8
	Arsenic	U	1.4 J	1.4 J	qualify	1
	Barium	U	76.6	76.6		
	Beryllium	U	1.1	1.1		
	Cadmium	U	0.44 UJ	0.44 UJ	qualify	2
	Calcium	U	3200 J	3200 J	qualify	3
	Chromium	U	23.5	23.5		
	Cobalt	U	11.8	11.8		
	Copper	U	13.3 J	13.3 J	qualify	2
	Iron	U	31400	31400		
	Lead	U	7.2 J	7.2 J	qualify	2
	Magnesium	U	3600	3600		
	Manganese	U	617 J	617 J	qualify	2
	Nickel	U	16.7 J	16.7 J	qualify	2
	Potassium	U	1460	1460		
	Selenium	U	1.1 UJ	1.1 UJ	qualify	9
	Silver	U	4.9	4.9		
	Vanadium	U	44.9	44.9		
	Zinc	U	230 J	230 J	qualify	2

Sample Analyte	Method Blank conc.	Lab Report Conc.	QAS Report Conc.	QAS Decision	Footnotes
Sample 466					
INORGANICS(mg/kg):					
Aluminum	U	31600	31600		
Antimony	7.398 J	9.5 JB	9.5 JB	negate	6
Arsenic	U	1.5 UJ	1.5 UJ	qualify	7
Barium	U	336	336		
Beryllium	U	3.8	3.8		
Cadmium	U	0.58 UJ	0.58 UJ	qualify	2
Calcium	U	111000 J	111000 J	qualify	3
Chromium	U	39.5	39.5		
Cobalt	U	11.7 J	11.7 J	qualify	1
Copper	U	81.8 J	81.8 J	qualify	2
Iron	U	49600	49600		
Lead	U	262 J	262 J	qualify	2
Magnesium	U	25600	25600		
Manganese	U	1960 J	1960 J	qualify	2
Mercury	U	0.81	0.81		
Nickel	U	23.9 J	23.9 J	qualify	2
Potassium	U	5870	5870		
Selenium	U	1.5 UJ	1.5 UJ	qualify	7, 9
Silver	U	5.7	5.7		
Sodium	U	840 J	840 J	qualify	1
Vanadium	U	40.8	40.8		
Zinc	U	735 J	735 J	qualify	2
Cyanide	U	0.86	0.86		
Sample 467					
INORGANICS(mg/kg):					
Aluminum	U	36400	36400		
Antimony	7.398 J	15.1 JB	15.1 JB	negate	6
Arsenic	U	14.9	14.9		
Barium	U	488	488		
Beryllium	U	4.6	4.6		
Cadmium	U	0.53 UJ	0.53 UJ	qualify	2
Calcium	U	136000 J	136000 J	qualify	3
Chromium	U	43.9	43.9		
Cobalt	U	14.9	14.9		
Copper	U	139 J	139 J	qualify	2
Iron	U	72900	72900		
Lead	U	190 J	190 J	qualify	2
Magnesium	U	28300	28300		
Manganese	U	1890 J	1890 J	qualify	2
Mercury	U	0.42	0.42		
Nickel	U	30.5 J	30.5 J	qualify	2
Potassium	U	5870	5870		
Selenium	U	2.4 J	2.4 J	qualify	4
Silver	U	2.8	2.8		
Sodium	U	1100 J	1100 J	qualify	1
Vanadium	U	31.5	31.5		
Zinc	U	486 J	486 J	qualify	2
Cyanide	U	0.91	0.91		
Sample 468					
INORGANICS(mg/kg):					
Aluminum	U	31400	31400		
Antimony	7.398 J	8.7 UJ	8.7 UJ	qualify	2, 8
Barium	U	273	273		

Sample Analyte	Method Blank conc.	Lab Report Conc.	QAS Report Conc.	QAS Decision	Footnotes
Beryllium	U	2.5	2.5		
Cadmium	U	3.9 J	3.9 J	qualify	2
Calcium	U	46900 J	46900 J	qualify	3
Chromium	U	51.9	51.9		
Cobalt	U	15.5	15.5		
Copper	U	123 J	123 J	qualify	2
Iron	U	64000	64000		
Lead	U	359 J	359 J	qualify	2
Magnesium	U	9940	9940		
Manganese	U	1440 J	1440 J	qualify	2
Mercury	U	1.1	1.1		
Nickel	U	38.5 J	38.5 J	qualify	2
Potassium	U	2420	2420		
Selenium	U	1.4 UJ	1.4 UJ	qualify	9
Silver	U	7.7	7.7		
Vanadium	U	62.9	62.9		
Zinc	U	657 J	657 J	qualify	2
Sample 469					
INORGANICS(mg/kg):					
Aluminum	U	18200	18200		
Antimony	7.398 J	8.6 UJ	8.6 UJ	qualify	2, 8
Arsenic	U	6.5	6.5		
Barium	U	122	122		
Cadmium	U	1.1 J	1.1 J	qualify	2
Calcium	U	9860 J	9860 J	qualify	3
Chromium	U	30.0	30.0		
Cobalt	U	14.1	14.1		
Copper	U	40.0 J	40.0 J	qualify	2
Iron	U	38000	38000		
Lead	U	55.3 J	55.3 J	qualify	2
Magnesium	U	4900	4900		
Manganese	U	2010 J	2010 J	qualify	2
Mercury	U	0.22	0.22		
Nickel	U	20.6 J	20.6 J	qualify	2
Potassium	U	1020	1020		
Selenium	U	1.4 UJ	1.4 UJ	qualify	7, 9
Silver	U	2.9	2.9		
Vanadium	U	50.7	50.7		
Zinc	U	537 J	537 J	qualify	2
Sample 470					
INORGANICS(mg/kg):					
Aluminum	U	23300	23300		
Antimony	7.398 J	43.8 JB	43.8 JB	qualify	2, 10, 12
Arsenic	U	9.3	9.3		
Barium	U	342	342		
Beryllium	U	2.5	2.5		
Cadmium	U	13.4 J	13.4 J	qualify	2
Calcium	U	63200 J	63200 J	qualify	3
Chromium	U	68.9	68.9		
Cobalt	U	23.5	23.5		
Copper	U	212 J	212 J	qualify	2
Iron	U	148000	148000		
Lead	U	5400 J	5400J	qualify	2
Magnesium	U	13300	13300		
Manganese	U	1790 J	1790 J	qualify	2

Sample Analyte	Method Blank conc.	Lab Report Conc.	QAS Report Conc.	QAS Decision	Footnotes
Mercury	U	1.3	1.3		
Nickel	U	52.9 J	52.9 J	qualify	2
Potassium	U	3390	3390		
Selenium	U	1.4 UJ	1.4 UJ	qualify	7, 9
Silver	U	11.9	11.9		
Vanadium	U	46.9	46.9		
Zinc	U	2270 J	2270 J	qualify	2
Cyanide	U	2.1	2.1		
Sample 471					
INORGANICS(mg/kg):					
Aluminum	U	25600	25600		
Antimony	7.398 J	32.5 JB	32.5 JB	qualify	2, 10, 12
Arsenic	U	8.3	8.3		
Barium	U	986	986		
Beryllium	U	2.5	2.5		
Cadmium	U	2.5 J	2.5 J	qualify	2
Calcium	U	74300 J	74300 J	qualify	3
Chromium	U	90.7	90.7		
Cobalt	U	20.2	20.2		
Copper	U	246 J	246 J	qualify	2
Iron	U	104000	104000		
Lead	U	703 J	703 J	qualify	2
Magnesium	U	14300	14300		
Manganese	U	1710 J	1710 J	qualify	2
Mercury	U	1.8	1.8		
Nickel	U	37.2 J	37.2 J	qualify	2
Potassium	U	3400	3400		
Selenium	U	2.5 J	2.5 J	qualify	4
Silver	U	6.3	6.3		
Vanadium	U	35.3	35.3		
Zinc	U	1300 J	1300 J	qualify	2
Sample 472					
INORGANICS(mg/kg):					
Aluminum	U	50700	50700		
Antimony	7.398 J	9.1 UJ	9.1 UJ	qualify	2, 8
Barium	U	387	387		
Beryllium	U	7.3	7.3		
Cadmium	U	0.59 UJ	0.59 UJ	qualify	2
Calcium	U	202000 J	202000 J	qualify	3
Chromium	U	28.7	28.7		
Copper	U	35.9 J	35.9 J	qualify	2
Iron	U	8820	8820		
Lead	U	91.3 J	91.3 J	qualify	2
Magnesium	U	62700	62700		
Manganese	U	1800 J	1800 J	qualify	2
Mercury	U	0.24	0.24		
Nickel	U	37.8 J	37.8 J	qualify	2
Potassium	U	9530	9530		
Selenium	U	2.2 J	2.2 J	qualify	4
Silver	U	2.8	2.8		
Sodium	U	1540 J	1540 J	qualify	1
Thallium	U	1.5 UJ	1.5 UJ	qualify	7
Vanadium	U	28.7	28.7		
Zinc	U	342 J	342 J	qualify	2
Cyanide	U	0.77	0.77		

Sample	Analyte	Method Blank conc.	Lab Report Conc.	QAS Report Conc.	QAS Decision	Footnotes
Sample 473						
INORGANICS(mg/kg):						
	Aluminum	U	24900	24900		
	Antimony	7.398 J	21.6 JB	21.6 JB	negate	6
	Arsenic	U	8.7	8.7		
	Barium	U	137	137		
	Beryllium	U	1.2 J	1.2 J	qualify	1
	Cadmium	U	0.59 UJ	0.59 UJ	qualify	2
	Calcium	U	10800 J	10800 J	qualify	3
	Chromium	U	34.1	34.1		
	Cobalt	U	16.0	16.0		
	Copper	U	40.7 J	40.7 J	qualify	2
	Iron	U	40500	40500		
	Lead	U	84.0 J	84.0 J	qualify	2
	Magnesium	U	5960	5960		
	Manganese	U	1590 J	1590 J	qualify	2
	Mercury	U	0.28	0.28		
	Nickel	U	30.5 J	30.5 J	qualify	2
	Potassium	U	1430	1430		
	Selenium	U	1.5 UJ	1.5 UJ	qualify	7, 9
	Vanadium	U	45.4	45.4		
	Zinc	U	718 J	718 J	qualify	2
Sample 474						
INORGANICS(mg/kg):						
	Aluminum	U	31700	31700		
	Antimony	7.398 J	22.6 JB	22.6 JB	negate	6
	Arsenic	U	6.3	6.3		
	Barium	U	196	196		
	Beryllium	U	2.9	2.9		
	Cadmium	U	2.0 J	2.0 J	qualify	2
	Calcium	U	58500 J	58500 J	qualify	3
	Chromium	U	121	121		
	Cobalt	U	17.5	17.5		
	Copper	U	41.1 J	41.1 J	qualify	2
	Iron	U	44800	44800		
	Lead	U	95.7 J	95.7 J	qualify	2
	Magnesium	U	12900	12900		
	Manganese	U	1360 J	1360 J	qualify	2
	Mercury	U	0.60	0.60		
	Nickel	U	35.4 J	35.4 J	qualify	2
	Potassium	U	2980	2980		
	Selenium	U	1.1 UJ	1.1 UJ	qualify	9
	Vanadium	U	53.8	53.8		
	Zinc	U	825 J	825 J	qualify	2
Sample 476						
INORGANICS(mg/kg):						
	Aluminum	U	25900	25900		
	Antimony	7.398 J	10.6 JB	10.6 JB	negate	6
	Arsenic	U	7.7	7.7		
	Barium	U	274	274		
	Beryllium	U	3.5	3.5		
	Cadmium	U	0.55 UJ	0.55 UJ	qualify	2
	Calcium	U	79400 J	79400 J	qualify	3
	Chromium	U	105	105		

ATTACHMENT L33

Sample	Analyte	Method Blank conc.	Lab Report Conc.	QAS Report Conc.	QAS Decision	Footnotes
	Cobalt	U	15.5	15.5		
	Copper	U	290 J	290 J	qualify	2
	Iron	U	54600	54600		
	Lead	U	526 J	526 J	qualify	2
	Magnesium	U	16800	16800		
	Manganese	U	1020 J	1020 J	qualify	2
	Mercury	U	0.57	0.57		
	Nickel	U	1180 J	1180 J	qualify	2
	Potassium	U	3600	3600		
	Selenium	U	1.4 UJ	1.4 UJ	qualify	7, 9
	Vanadium	U	28.3	28.3		
	Zinc	U	404 J	404 J	qualify	2
Sample 477						
	INORGANICS(mg/kg):					
	Aluminum	U	19200	19200		
	Antimony	7.398 J	8.0 UJ	8.0 UJ	qualify	2, 8
	Arsenic	U	1.5 J	1.5 J	qualify	1
	Barium	U	97.8	97.8		
	Beryllium	U	2.6	2.6		
	Cadmium	U	0.52 UJ	0.52 UJ	qualify	2
	Calcium	U	11500 J	11500 J	qualify	3
	Chromium	U	26.4	26.4		
	Cobalt	U	25.3J	25.3J	qualify	1
	Copper	U	42.8 J	42.8 J	qualify	2
	Iron	U	38900	38900		
	Lead	U	60.8 J	60.8 J	qualify	2
	Magnesium	U	5770	5770		
	Manganese	U	453 J	453 J	qualify	2
	Mercury	U	0.21	0.21		
	Nickel	U	2990 J	2990 J	qualify	2
	Potassium	U	4100 J	4100 J	qualify	1
	Selenium	U	1.3 UJ	1.3 UJ	qualify	9
	Vanadium	U	68.5	68.5		
	Zinc	U	191 J	191 J	qualify	2
Sample 478						
	INORGANICS(mg/kg):					
	Aluminum	U	5130	5130		
	Antimony	7.398 J	6.8 UJ	6.8 UJ	qualify	2, 8
	Arsenic	U	1.8 J	1.8 J	qualify	1
	Barium	U	15.8 J	15.8 J	qualify	1
	Beryllium	U	1.2	1.2		
	Cadmium	U	0.44 UJ	0.44 UJ	qualify	2
	Calcium	U	3420 J	3420 J	qualify	3
	Chromium	U	47.4	47.4		
	Cobalt	U	7.1 J	7.1 J	qualify	1
	Copper	U	235 J	235 J	qualify	2
	Iron	U	17300	17300		
	Lead	U	55.2 J	55.2 J	qualify	2
	Magnesium	U	1780	1780		
	Manganese	U	77.7 J	77.7 J	qualify	2
	Nickel	U	22.4 J	22.4 J	qualify	2
	Potassium	U	767 J	767 J	qualify	1
	Selenium	U	1.1 UJ	1.1 UJ	qualify	9
	Vanadium	U	41.6	41.6		
	Zinc	U	62.9 J	62.9 J	qualify	2

Sample	Analyte	Method Blank conc.	Lab Report Conc.	QAS Report Conc.	QAS Decision	Footnotes
Sample 480						
INORGANICS(mg/kg):						
	Aluminum	U	15700	15700		
	Antimony	7.398 J	19.3 JB	19.3 JB	negate	6
	Arsenic	U	32.2	32.2		
	Barium	U	512	512		
	Beryllium	U	3.0	3.0		
	Cadmium	U	0.46 UJ	0.46 UJ	qualify	2
	Calcium	U	51200 J	51200 J	qualify	3
	Chromium	U	19.1 J	19.1 J	qualify	11
	Cobalt	U	31.4	31.4		
	Copper	U	539 J	539 J	qualify	2
	Iron	U	28900	28900		
	Lead	U	172 J	172 J	qualify	2
	Magnesium	U	22800	22800		
	Manganese	U	797 J	797 J	qualify	2
	Nickel	U	60.8 J	60.8 J	qualify	2
	Potassium	U	5110	5110		
	Selenium	U	2.3 J	2.3 J	qualify	4
	Sodium	u	1360	1360		
	Vanadium	U	29.8	29.8		
	Zinc	U	586 J	586 J	qualify	2
Sample 481						
INORGANICS(mg/kg):						
	Aluminum	U	43600	43600		
	Antimony	7.398 J	8.3 UJ	8.3 UJ	qualify	2, 8
	Arsenic	U	4.3 J	4.3 J	qualify	1
	Barium	U	409	409		
	Beryllium	U	7.0	7.0		
	Cadmium	U	3.4 J	3.4 J	qualify	2
	Calcium	U	170000 J	170000 J	qualify	3
	Chromium	U	24.5	24.5		
	Cobalt	U	9.1 J	9.1 J	qualify	1
	Copper	U	48.9 J	48.9 J	qualify	2
	Iron	U	31400	31400		
	Lead	U	85.8 J	85.8 J	qualify	2
	Magnesium	U	32700	32700		
	Manganese	U	3540 J	3540 J	qualify	2
	Mercury	U	0.30	0.30		
	Nickel	U	23.3 J	23.3 J	qualify	2
	Potassium	U	7120	7120		
	Selenium	U	3.6 J	3.6 J	qualify	4
	Sodium	u	1780	1780		
	Vanadium	U	21.8	21.8		
	Zinc	U	2020 J	2020 J	qualify	2
Sample 482						
INORGANICS(mg/kg):						
	Aluminum	U	50400	50400		
	Antimony	7.398 J	10.6 JB	10.6 JB	negate	6
	Arsenic	U	3.3 J	3.3 J	qualify	1, 7
	Barium	U	493	493		
	Beryllium	U	8.8	8.8		
	Cadmium	U	4.3 J	4.3 J	qualify	2
	Calcium	U	18400 J	18400 J	qualify	3

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Sample	Analyte	Method Blank conc.	Lab Report Conc.	QAS Report Conc.	QAS Decision	Footnotes
	Chromium	U	89.8	89.8		
	Cobalt	U	11.8	11.8		
	Copper	U	139 J	139 J	qualify	2
	Iron	U	14600	14600		
	Lead	U	391 J	391 J	qualify	2
	Magnesium	U	4270	4270		
	Manganese	U	2430 J	2430 J	qualify	2
	Mercury	U	0.18	0.18		
	Nickel	U	48.6 J	48.6 J	qualify	2
	Potassium	U	9880	9880		
	Selenium	U	3.2 J	3.2 J	qualify	4
	Silver	U	44.9	44.9		
	Sodium	U	1690	1690		
	Thallium	U	1.1 UJ	1.1 UJ	qualify	7
	Vanadium	U	40.2	40.2		
	Zinc	U	393 J	393 J	qualify	2
	Cyanide	U	1.3	1.3		
Sample 484						
	INORGANICS(mg/kg):					
	Aluminum	U	16000	16000		
	Antimony	7.398 J	66.5 JB	66.5 JB	negate	6
	Arsenic	U	5.6 UJ	5.6 UJ	qualify	7
	Barium	U	124 J	124 J	qualify	1
	Cadmium	U	9.6 J	9.6 J	qualify	2
	Calcium	U	17600 J	17600 J	qualify	3
	Chromium	U	25.0	25.0		
	Copper	U	19.4 J	19.4 J	qualify	1, 2
	Iron	U	11800	11800		
	Lead	U	76.9	76.9		
	Magnesium	U	3315 J	3315 J	qualify	1
	Manganese	U	1550 J	1550 J	qualify	2
	Selenium	U	12.7 J	12.7 J	qualify	4
	Vanadium	U	31.2 J	31.2 J	qualify	1
	Zinc	U	607 J	607 J	qualify	2
Sample 485						
	INORGANICS(mg/kg):					
	Aluminum	U	34700	34700		
	Antimony	7.398 J	33.8 JB	33.8 JB	negate	6
	Arsenic	U	5.4 J	5.4 J	qualify	1
	Barium	U	276	276		
	Cadmium	U	5.3 J	5.3 J	qualify	2
	Calcium	U	18700 J	18700 J	qualify	3
	Chromium	U	44.6	44.6		
	Copper	U	27.3 J	27.3 J	qualify	2
	Iron	U	18100	18100		
	Lead	U	97.1	97.1		
	Magnesium	U	3970 J	3970 J	qualify	1
	Manganese	U	1820 J	1820 J	qualify	2
	Mercury	U	0.52	0.52		
	Selenium	U	8.1 J	8.1 J	qualify	4
	Thallium	U	21.7	21.7		
	Vanadium	U	51.1	51.1		
	Zinc	U	985 J	985 J	qualify	2

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Sample	Analyte	Method Blank conc.	Lab Report Conc.	QAS Report Conc.	QAS Decision	Footnotes
Sample 486						
INORGANICS(mg/kg):						
	Aluminum	U	21200	21200		
	Antimony	7.398 J	9.5 JB	9.5 JB	negate	6
	Arsenic	U	5.3	5.3		
	Barium	U	138	138		
	Beryllium	U	1.1 J	1.1 J	qualify	1
	Cadmium	U	0.50 UJ	0.50 UJ	qualify	2
	Calcium	U	7450 J	7450 J	qualify	3
	Chromium	U	43.7	43.7		
	Cobalt	U	16.9	16.9		
	Copper	U	33.5 J	33.5 J	qualify	2
	Iron	U	47000	47000		
	Lead	U	29.7	29.7		
	Magnesium	U	4490	4490		
	Manganese	U	1570 J	1570 J	qualify	2
	Mercury	U	0.21	0.21		
	Nickel	U	32.4 J	32.4 J	qualify	2
	Potassium	U	894 J	894 J	qualify	1
	Selenium	U	1.3 UJ	1.3 UJ	qualify	7, 9
	Silver	U	2.4 J	2.4 J	qualify	1
	Thallium	U	1.3 UJ	1.3 UJ	qualify	7
	Vanadium	U	33.6	33.6		
	Zinc	U	591 J	591 J	qualify	2
Sample 487						
INORGANICS(mg/kg):						
	Aluminum	U	41600	41600		
	Antimony	7.398 J	13.9 JB	13.9 JB	negate	6
	Barium	U	461	461		
	Beryllium	U	6.3	6.3		
	Cadmium	U	0.48 UJ	0.48 UJ	qualify	2
	Calcium	U	166000 J	166000 J	qualify	3
	Chromium	U	22.0	22.0		
	Cobalt	U	8.1 J	8.1 J	qualify	1
	Copper	U	213 J	213 J	qualify	2
	Iron	U	12800	12800		
	Lead	U	230 J	230 J	qualify	2
	Magnesium	U	34400	34400		
	Manganese	U	2350 J	2350 J	qualify	2
	Mercury	U	0.20	0.20		
	Nickel	U	14.1 J	14.1 J	qualify	2
	Potassium	U	8730	8730		
	Selenium	U	3.1 J	3.1 J	qualify	4
	Sodium	U	1530	1530		
	Thallium	U	1.2 UJ	1.2 UJ	qualify	7
	Vanadium	U	19.8	19.8		
	Zinc	U	256 J	256 J	qualify	2
Sample 488						
INORGANICS(ug/L):						
	Barium	U	55.0 U	55.0 UJ	qualify	8
	Calcium	U	22500 J	22500 J	qualify	3
	Iron	U	90.4 J	90.4 J	qualify	1
	Lead	U	3.0 U	3.0 UJ	qualify	8
	Magnesium	U	7850	7850		

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Sample	Analyte	Method Blank conc.	Lab Report Conc.	QAS Report Conc.	QAS Decision	Footnotes
	Sodium	U	3690 J	3690 J	qualify	1
Sample 489						
	INORGANICS(ug/L):					
	Barium	U	55.0 U	55.0 UJ	qualify	8
	Calcium	U	5300 J	5300 J	qualify	3
	Copper	U	795 J	795 J	qualify	2
	Lead	U	3.0 U	3.0 UJ	qualify	8
Sample 490						
	INORGANICS(ug/L):					
	Barium	U	55.0 U	55.0 UJ	qualify	8
	Calcium	U	30100 J	30100 J	qualify	3
	Lead	U	3.0 U	3.0 UJ	qualify	8
	Magnesium	U	9590	9590		
	Potassium	U	1890 J	1890 J	qualify	1
	Sodium	U	16200	16200		
	Zinc	U	29.2 J	29.2 J	qualify	2
Sample 491						
	INORGANICS(ug/L):					
	Barium	U	55.0 U	55.0 UJ	qualify	8
	Calcium	U	21900 J	21900 J	qualify	3
	Copper	U	159 J	159 J	qualify	2
	Lead	U	5.2 J	5.2 J	qualify	12
	Magnesium	U	7210	7210		
	Manganese	U	8.0 J	8.0 J	qualify	1
	Sodium	U	21900	21900		
Sample 493						
	INORGANICS(ug/L):					
	Barium	U	55.0 U	55.0 UJ	qualify	8
	Calcium	U	21500 J	21500 J	qualify	3
	Iron	U	87.6 J	87.6 J	qualify	1
	Lead	U	3.0 U	3.0 UJ	qualify	8
	Magnesium	U	7630	7630		
	Sodium	U	3550 J	3550 J	qualify	1

FOOTNOTES

1. The reported concentration was quantitatively qualified because the concentration was below the CRDL but greater than the IDL. The concentration is considered estimated since the value obtained is at the low end of the instrument performance.

2. In the duplicate sample analysis for metals, the analyte fell outside the control limits of 20 percent RPD or ± CRDL. Therefore, the result for the metal is qualified.

3. The reported metal value is qualified because the Serial Dilution is not within ten percent (10%) of sample concentration.

4. The reported metal value is qualified because the spike recovery was between 30 and 74 percent. The result may be biased low.

5. The result for this analyte is qualified because the correlation coefficient is less than 0.995 for the initial and reanalysis for method of standard addition.

6. The value reported is less than or equal to three (3) times the value in the preparation blank. It is the policy of NJDEP-DPFSR to negate the reported value as due to probable contamination unrelated to the actual sample. The end-user, however, is alerted that a reportable quantity of the analyte was detected.

7. The reported non-detect is qualified because the analytical spike of this analyte during the GFAA analysis was below the recovery range of 85-115%. The reported detection limit may be biased low.

8. This non-detected metal detection limit is qualified (UJ) because the CRDL standard was below the recovery range (80-120 %).

9. The non-detected metal detection limit is qualified (UJ) because the spike recovery is between 30 and 74 percent. The detection limit for this metal could be elevated because of spike recovery.

10. The value reported is greater than three (3) times the value in the preparation blank and is considered "real". However, the reported value must be quantitatively qualified "J" due to the method preparation blank contamination. The "B" qualifier alerts the end-user to the presence of this analyte in the method blank/prep blank.

11. This metal value is qualified because the associated CRDL is above the recovery range of 80% - 120%. The reported concentration may be biased high.

12. This metal value is qualified because the associated CRDL is below the recovery range of 80% - 120%. The reported concentration may be biased low.